Oxfordshire Innovation Engine 2023 Case Study – Immunocore

Immunocore develops novel therapies that harness our immune system by using T Cell Receptor (TCRs) biology to fight cancer, infectious diseases and autoimmune conditions, using science that originated from research conducted at Oxford University.

Researchers at the company develop, what they call, ImmTAX™ (Immune Mobilizing Monoclonal TCRs Against X disease) molecules. The idea of the 'X' is that the technology can be used to target cancers and other diseases, using the same approach.

These molecules are designed to get around the challenge that the body's natural immune system is not always able to do what it is meant to do, because cancers and infectious diseases are adept at hiding from it or, in the case of autoimmune diseases, the immune system attacks the body. They work by helping the body detect cancer or disease and encourage the immune system to kickstart a patient's natural defences, for cancer and infectious diseases, or control them, for autoimmune conditions.

When the Innovation Engine update report of 2016 last covered Immunocore, it had scientific partnership arrangements with Genentech (a Roche company), GSK, Medimmune (owned by AstraZeneca) and Eli Lilly. Trials were reported as providing positive early results.

Since then, partnerships may have changed, but the positive results have continued. In 2022, Immunocore received FDA and EMA approval for its treatment for Uveal Melanoma (a cancer that affects the eye). It is the company's first commercialised treatment, the first TCR therapy approved, as well as the first approved treatment for the condition. The drug is now approved for use in around thirty countries. Discussions with NICE are ongoing to establish if the treatment can be made available in the UK on the NHS.

Immunocore is conducting multiple additional trials. The therapy approved for uveal melanoma is being investigated for treating advanced melanoma in a phase 2/3 trial, while a second investigational therapy is currently in a phase 1 trial enrolling patients with endometrial, ovarian, lung and melanoma, as well as a range of other solid tumours.

Potential candidates for colorectal, gastric and pancreatic cancers are in the pre-clinical stage, aiming to start Phase 1 trials in the next 18 months.

The business is also conducting Phase 1 trials in infectious disease in hepatitis B (HBV) and HIV, the latter is in partnership with the Bill and Melinda Gates Foundation.

At the moment, its treatments are designed to be administered intravenously on a weekly schedule. Tests are ongoing to establish if the 'half-life' of its treatments could be extended so injections might last longer and require patients to receive treatments less frequently.

Financially, there have been several huge developments since the 2016 Innovation Engine update report. The business floated in New York in February 2021. This followed two rounds of financing. In 2020, a Series B round raised $130m and then a Series C round raised $75m in 2021. Then, following its floatation, the business raised a further $140m in 2022 from existing shareholders.

Throughout this growth in financing and regulatory approval for its first treatment, Immunocore has remained in the Milton Park headquarters and laboratories it opened in 2000. Of its 450 staff, 300 are based at Milton Park and the remainder are split across offices near Philadelphia, opened in 2014, and near Washington, opened in 2019. According to the company's CTO and Head of Pipeline and Platform Research, Annelise Vuidepot, the commitment to its roots is not just historic, it is also forward-looking. "The technology was developed in Milton Park and this site remains our Research and CMC base. We are now growing teams across many other functions, including commercial, at all three sites, and the leadership team is split between the three locations" she says. "As of today, Milton Park remains our largest site because of the availability of research talent in the area due to the proximity to Oxford but also because the city is an integral part of the Oxford, London, and Cambridge golden triangle."

Immunocore, now a commercial-stage biotech listed on NASDAQ, retains strong ties to the University of Oxford and continues to rely on academic collaborations. While the company's footprint is increasing in the US, the research pipeline for new discoveries is set to remain just outside Oxford, where the company began and where it feels it can continue to tap into the brightest talent and the excellent academic scientific network going forward.