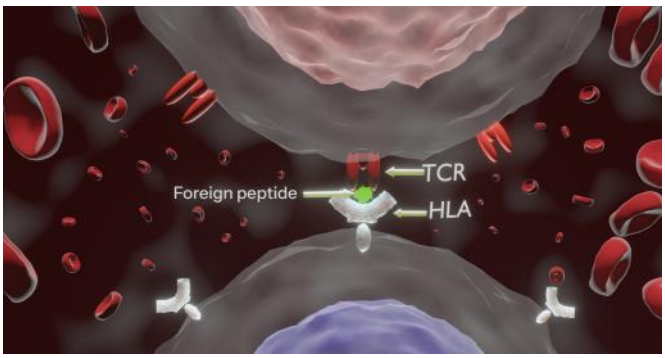
PROJECT NUMBER

22826

HLA-E - enabled universal Wilm’s tumour-1 TCR therapy

This patented technology covers T cell receptors (TCRs) specific for a WT1 peptide presented by HLA-E, alongside nucleic acids and vectors encoding these receptors. It enables the development of truly universal, highly targeted T cell therapies - removing the need for patient-specific HLA matching.

Applications: Acute myeloid leukaemia (AML), Solid Tumours with WT1 expression, off-the-shelf TCR-T cell therapies, gene and cell therapy platforms



Features	Benefits
Strong, multi-layered IP protection	The patent encompasses not only the TCRs themselves, but also encoding nucleic acids, expression vectors, and therapeutic applications. This creates multiple commercial entry point from cell therapies to gene delivery platform

Features	Benefits
First-in-class HLA-E - restricted WT1 targeting	The first demonstration of a WT1 peptide presented by HLA-E opens an entirely new immunotherapeutic pathway. This expands the addressable target space beyond conventional HLA-restricted approaches, creating differentiated clinical and commercial opportuni
Enables off-the-shelf TCR therapies	By leveraging the non-polymorphic nature of HLA-E, therapies derived from this IP can be deployed across broad patient populations without matching. This significantly reduces manufacturing complexity, cost, and time to treatment - key barriers in current
Designed for genetic engineering and scalable delivery	The inclusion of nucleic acids and vectors enables straightforward integration into established cell therapy workflows (e.g. viral or non-viral gene transfer).This compatibility accelerates translation into clinical-stage TCR-T products and supports indus
Broad therapeutic and platform potential	While highly relevant to AML and other WT1-expressing cancers, the platform extends to additional tumour antigens and disease areas. Its adaptability to infectious diseases further enhances its value as a versatile immunotherapy backbone technology

Available for

- Co-development
- Consulting

- Licensing

To find out more, contact enquiries@innovation.ox.ac.uk and quote the project number.

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