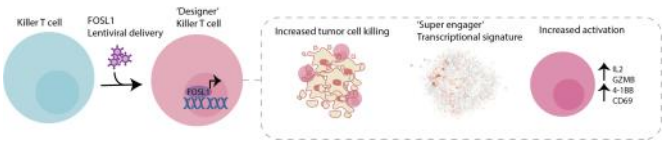
PROJECT NUMBER

22370

Designer Cytotoxic T cells: Transcription Factor-Based Engineering with FOSL1

Method to enhance persistence and cytotoxicity of T-Cell adoptive therapies.
This technology leverages a transcription factor, FOSL1, overexpressed to enhance T-cell function, boosting tumour-killing efficiency and engagement. It presents a promising advancement for adoptive therapies like CAR-T, TCR-T, and TIL, with broad applications in cancer treatment.

Applications: Immunotherapy, Adoptive Cell Therapy (e.g. CAR-T, TCR-T, TILs)



Features	Benefits
Enhanced cytotoxicity	Destroy tumour cells faster and more effectively, enabling better cancer clearance.
Increased T-cell engagement	Improved cytokine production and expression of tissue homing receptors
Safety profile	FOSL1 overexpression does not result in non-specific activation – cytotoxicity is triggered only upon tumour engagement
Versatility and scalability	Can integrate with existing T-cell therapies (e.g., CAR-T, TCR-T, TIL)

Awaiting patent and Available for

- Co-development
- Consulting
- Licensing

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

The above information is provided ‘as is’ without conditions or warranties. Oxford University Innovation makes no representation and gives no warranty that it is the owner of the intellectual property rights in the technology described. © Oxford University Innovation Ltd 2026, Buxton Court, 3 West Way, Oxford, OX2 0JB.