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ImmTAC™ molecules: Novel bi-functional TCR-based biologicals for targeted immunotherapy

Immunocore has developed a unique biologic platform through the creation of soluble T-cell receptors (monoclonal TCRs) targeting specific peptides in the context of MHC Class I. Anti-cancer mTCRs have been engineered to produce bi-specific drugs that modulate T-cell activity: Immune mobilizing monoclonal TCRs against Cancer (ImmTAC). The ability of ImmTAC molecules to bind intracellular peptides presented by MHC Class I expands the addressable antigenic landscape. ImmTAC molecules are able to specifically and potently redirect T-cell activity against tumor cells. Our lead program, IMCgp100 targeting malignant melanoma, shows promise as a first-in-class immunotherapeutic agent with a well-tolerated safety profile and promising signs of durable efficacy in both cutaneous and uveal melanoma. The ImmTAC technology joins a contingent of immunotherapies that offer an exciting approach towards durable responses in oncology but also the prospect of expanding the range of indications beyond cancer into infectious and autoimmune diseases. Reengineering the ImmTAC molecule to incorporate immune-suppressive modalities offers an exciting therapeutic opportunity in the context of autoimmunity.

Biography

Nicola M G Smith has completed her PhD at the Kennedy Institute of Rheumatology, Imperial College London with Prof. Fionula Brennan. She carried out her Postdoctoral studies at the Weatherall Institute of Molecular Medicine and the Nuffield Department of Medicine, University of Oxford with Prof. Andrew McMichael. She is currently working at Immunocore as a Senior Scientist in the Autoimmunity team.

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