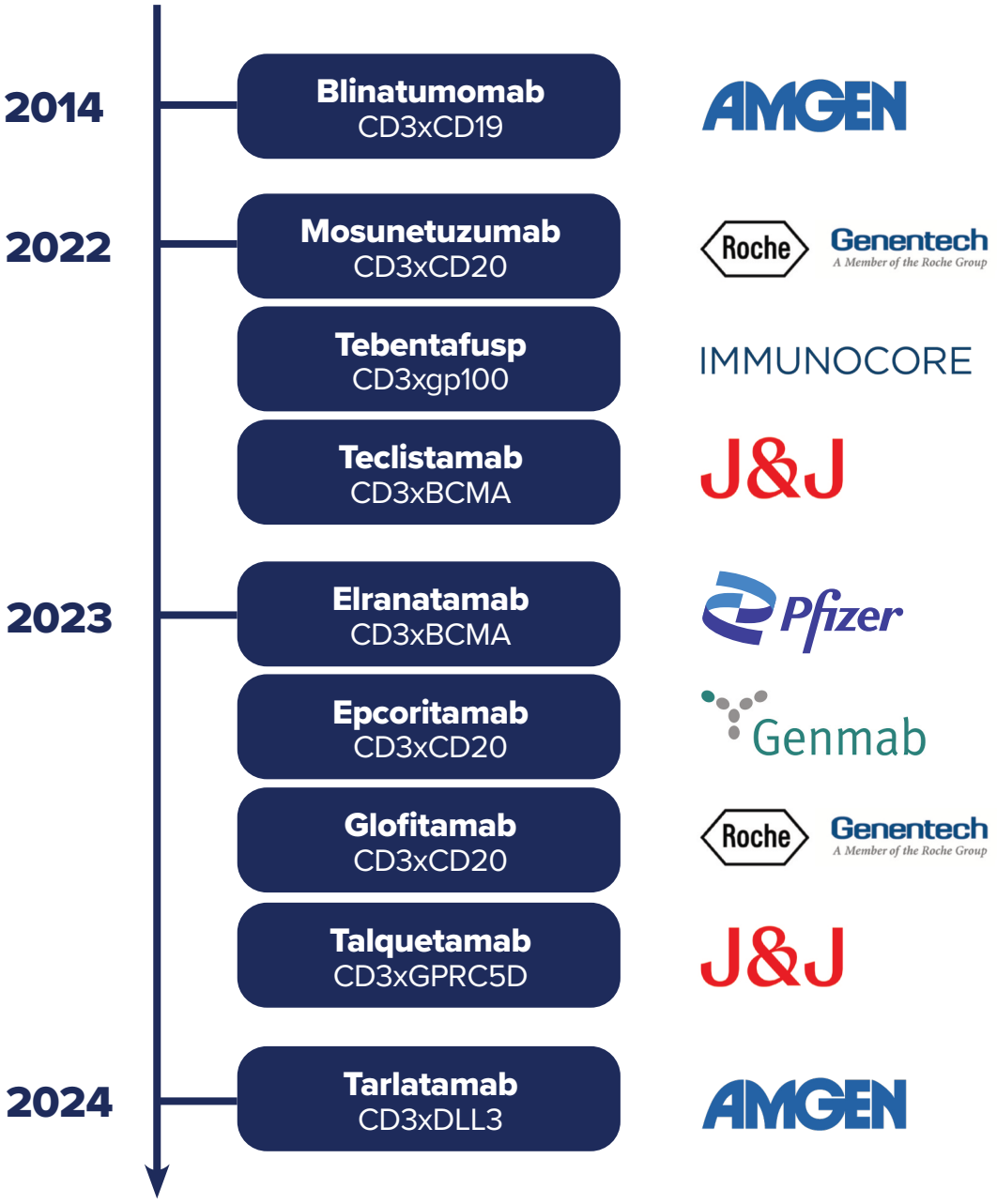
Solutions for T Cell Engager (TCE) Programs

CellCarta

T cell engagers are bispecific antibodies designed to redirect cytotoxic T cells to pathogenic cells by simultaneously binding CD3 on T cells and disease-associated antigens on target cells. As an off-the-shelf therapy it can be rapidly deployed, necessitating neither personalized manufacturing nor lymphodepletion pre-conditioning. In addition, it offers a more predictable safety profile compared to CAR-T cells - including reduced rates and severity of CRS and ICANS and no risk of long-term T cell malignancies.

TCEs Approved by the FDA



Trusted Partner for your TCE Program:
Supported over 45 TCE studies across 20+ Phase 1 oncology trials collaborating with the top 10 global pharma leaders.

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CellCarta's Solutions

Key limitations of T cell engager (TCE) therapies include an incomplete understanding of primary resistance to treatment, which is influenced by the baseline composition of the T cell compartment and acquired resistance that is driven by T cell exhaustion. In addition to supporting the assessment of safety and efficacy, CellCarta can also help you unravel the mechanisms at play behind primary and acquired resistance to TCE therapies.

Confirming Target Expression	Assessing Safety Risks	Landscaping T Cells at Baseline	Monitoring T Cell State
Confirming target expression helps assess drug engagement potential—critical for efficacy—and supports patient selection, CDx development, and off-target monitoring. CellCarta offers a range of solutions to deliver target expression data for a variety of sample types: • Target expression in solid tumour using IHC and IF • Target expression in the periphery or in biopsy samples using flow cytometry	Cytokine profiling, deployed in early clinical phases, can provide insight into adverse effects like CRS and ICANS. CellCarta enables early-phase examination of broad-spectrum cytokine profiles through several immunoassay platforms: • Olink® • MSD® • ELLA™	T cell fitness, the ability to generate an appropriate immune response following stimulation, can profoundly affect responses to T cell engagers. CellCarta unlocks the power of single-cell resolution technologies to reveal robust signatures of T cell health and anticipate clinical outcome: • High-dimensional (spectral) flow cytometry with phenotyping panels • Single-cell genomics assays pairing transcriptomic, proteomic and T cell repertoire readouts	T cell exhaustion, a dysfunctional state that can appear as a result of prolonged activation, imposes major constraints on the therapeutic efficacy of T cell engagers. CellCarta's combined expertise in T cell immunology and flow cytometry allows us to offer: • Off-the-shelf panels with key markers to assess T cell activation (CD69, CD38, HLA-DR) and exhaustion (PD-1, TIM-3, LAG3, CD39) • Custom assay development to incorporate novel exhaustion markers (TOX, TCF1/7, Tbet, KLRG1) • Enumeration panels to track pathogenic cell absolute counts, indirectly linked to T cell state
Visit our complete IHC biomarker list:	Learn more about our expertise in immunoassays for cytokine measurement:	Discover our experience in spatial biology:	Uncover the power of our flow cytometry solutions:

CDx: companion diagnostics, IHC: immunohistochemistry, IF: immunofluorescence, CRS: cytokine release syndrome ICANS: immune effector cell-associated neurotoxicity syndrome

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CellCarta

ABOUT CELLCARTA

Leading provider of specialized precision medicine laboratory services to the biopharmaceutical industry. Leveraging its integrated analytical platforms in immunology, histopathology, proteomics and genomics, as well as related specimen collection and logistics services, CellCarta supports the entire drug development cycle, from discovery to late-stage clinical trials. The company operates globally with 9 facilities located in Canada, USA, Belgium, Australia and China.

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