

# Engineered TCR and CAR Immunotherapeutics 2015

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## Abstracts

### Engineered TCR and CAR Immunotherapeutics 2015:

A comparative analysis of the landscape of and business opportunities with TCR and CAR antibodies, T cells, NK cells, TILs, DLIs & CTLs

The engineered T cell receptor (TCR) for targeting of intracellular targets not drugable by conventional antibody technologies, and specifically targeted engineered T cells are two of the most promising emerging technologies in immuno-oncology apart from immune checkpoint modulators. The relevance of TCR targeting and engineered T cells is reflected by impressive clinical results with CD19 chimeric antigen receptor (CAR) T cells and outstanding partnering and financing deals concluded within the last two years.

### Leveraging the power of T cells by cellular and recombinant immuno-therapeutics

Intra-cellular Targets

Cell surface targets

Cellular

TCR T Cells

CAR T Cells (autologous/allogeneic)

Recombinant

Bispecific TCR-anti-CD3 (e.g. ImmTACs)

## Bispecific antibodies (incl. anti-CD3)

This report Engineered TCR and CAR Immunotherapeutics 2015: A comparative analysis of the landscape of and business opportunities with TCR and CAR antibodies, T cells, NK cells, TILs, DLIs & DLIs as of March 2015 brings you up-to-date regarding key players, key technologies, TCR and CAR immunotherapeutic projects, business deals and private and public financing rounds. The report analyzes the TCR and CAR immunotherapeutic pipelines and stakeholders in the field, especially among Big Pharma/Biotech and technology companies. The report highlights the value of TCR and CAR immunotherapeutics in terms of partnering economic conditions, private financing rounds and (initial) public offerings with the resulting market capitalization of companies.

However, progress in clinical trials and supply of clinical grade batches reveals some major limitations which need to be surmounted and the problems solved if TCR and CAR immunotherapeutics want to become commercially viable and successful products. This report describes the challenges and limitations and identifies solutions provided by new technologies which offer tremendous business opportunities.

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This report has been built in a bottom-up basis by desktop search to identify and describe company, product, technology and business/financing profiles which then are evaluated and analyzed with a final outlook describing perspectives with challenges and opportunities.

### **What will you find in the report?**

Profiles of TCR and CAR immunotherapeutics in development;

Competitor analysis of CD19 CAR T cells;

Options to improve CAR T cells regarding efficacy, safety, manufacturing and commercial value;

Target analysis of TCR T cells in R&D;

CAR T Cell pipeline in hematology;

CAR T Cell pipeline in solid tumors;

Allogeneic TCR and CAR T cells in R&D;

Universal antibody-targeted CAR T cells and NK cells;

Pipeline of most promising TILs, NK cells, DLIs and CTLs;

Technologies needed for next generations of TCR and CAR immunotherapeutics;

Profiles of biotechnology companies incl. financing and licensing/partnering;

Profiles and scope of interest of Big Pharma/Biotech companies for TCRs & CARs;

Stakeholder analysis (established, emerging, non-US, technology providing companies);

Potential of alternative adoptive immunotherapies with NK cells, TILs, CTLs and DLIs;

Analysis of major partnering deals between Big pharma and technology companies;

Economic terms of pharma-biotech deals;

Opportunities for biotech-biotech deals in the TCR and CAR field;

Potential to raise private money with TCR and CAR technologies;

Success in initial public offerings and follow on offerings with TCRs and CARs;

Limitations and hurdles with current TCR and CAR immunotherapeutics;

Opportunities for novel TCR and CAR immunotherapeutics;

Pricing of TCR and CAR immunotherapeutics;

Aspects of manufacturing and commercialization.

### **Who will benefit from the report?**

Venture capital, private equity and investment managers;

Financial analysts;

CFO;

Business development and licensing (BDL) specialists;

Marketing managers;

CEO, COO and managing directors;

Corporate strategy, product and portfolio analysts and managers;

Chief Technology Officer;

Cell technology and manufacturing specialists;

Clinical and preclinical development specialists.

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ALT-801

IMCgp100

ESK1 / ESKM3.2

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NY-ESOc259T

JCAR016

TBI-1201

TBI-1301

BPX-701

#### 3.3 CD19 CAR T Cells

CTL019

HuCART19 (HuCTL019)

JCAR015

JCAR017

JCAR014

KTE-C19

CD19-CAR T cells (Takara)

BPX-401

#### 3.4 Other Autologous CAR T Cells for Hematological Malignancies

CART123

CM-CS1

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G2-CAR.OX4028.z.ICD19

BPX-601

CAR-NKp30/B7H6

CART-EGFRvIII

CART-meso T cells

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UCART19

UCART38

UCART123

UCARTCS1

### 3.7 Universal CAR T cells

ATTCK20

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Natural Killer (NK) cells: Neukoplast / NK-92

NK cells: CD16-Neukoplast

NK cells: NK-92.ErbB2/Her2

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