

Global TCR Therapy Market (2nd Edition), 2022-2035: Distribution by Target Indication (Nasopharyngeal Carcinoma, Multiple Myeloma, Head and Neck Carcinoma, Sarcoma, Melanoma, Acute Myeloid Leukemia, Lung Cancer, Ovarian Cancer, and Merkel Cell Cancer), Target Antigen (NY-ESO-1, EBV, gp100, and others), Key Players and Key Geographies (North America, Europe, Asia Pacific, Latin America, Middle East and North Africa, and Rest of the World): Industry Trends and Global Forecasts, 2022-2035

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Abstracts

The TCR therapy market is expected to reach USD 0.03 billion in 2023 anticipated to grow at a CAGR of 51% during the forecast period 2023-2035.

T-cell receptor (TCR) based therapy is a burgeoning area within adoptive cell therapy. It involves the manipulation of lymphocytes through genetic modifications to target specific tumor markers. The effectiveness of these therapies in eliminating tumor cells primarily relies on their previous sensitization to cancer-specific antigens. This attribute enables these interventions to selectively locate and eliminate tumor cells in the body while mitigating potential side effects associated with treatment. The growing interest in this field is driven by promising results observed in previous trials, particularly focused on various hematological cancers and solid tumors. This momentum is further fueled by significant financial support from investors and the optimistic trends in clinical trial outcomes. As a result, the market for T-cell receptor therapy is expected to witness substantial growth in the forecasted period.

Report Coverage

An executive summary of the insights captured in our research. It offers a high-level view on the likely evolution of the TCR-based therapy market in the short to mid-term and long term.

A general overview of TCR-based therapies. In this section, we have briefly discussed the conventional forms of therapy that are being used for the treatment of various oncological indications. Further, it includes a discussion on the advent and historical evolution of cancer immunotherapy, general manufacturing procedure of T-cell immunotherapies, and key attributes in development of TCR-based therapies.

Detailed assessment of the current market landscape of more than 190 TCR-based therapies that are currently approved or are in different stages of the development. It features a comprehensive analysis of pipeline molecules with respect to the type of developer (industry / non-industry), phase of development (approved, phase II, phase I / II, phase I, and preclinical), therapeutic area (hematological cancer, solid tumor, and undisclosed), key target indication (lung cancer, melanoma, hepatocellular carcinoma, cervical cancer, ovarian cancer, sarcoma, breast cancer, gastric cancer, multiple myeloma, pancreatic cancer, acute myeloid leukemia, myelodysplastic syndrome, nasopharyngeal carcinoma, and others), key target antigen (NY-ESO-1, MAGE, HBV, PRAME, KRAS, EBV, HPV, Neoantigen, LAGE-1a, Meso, HLA, and others), source of T-cells (autologous / allogeneic), route of administration (intravenous and intratumoral), dose frequency (single dose, multiple dose, and split dose), target patient segment (children, adults and elderly patients), type of therapy (monotherapy and combination therapy). Additionally, it highlights the most active industry and non-industry players (in terms of number of pipeline candidates) engaged in development of TCR-based therapies. Further, chapter also includes developer landscape analysis based on some relevant parameters, including year of establishment, company size (small, mid-sized, and large) and location of headquarters (North America, Europe, and Asia Pacific).

A comprehensive target antigen analysis, highlighting the most popular target antigens related to hematological malignancies and solid tumors, based on the number of TCR-based therapies that are being developed for a particular type of antigen by various industry stakeholders to identify potential targets.

A detailed analysis of completed, ongoing, and planned clinical studies related to TCR-based therapies, based on several relevant parameters, such as trial registration year, enrolled patient population, trial recruitment status, trial phase, target patient segment, type of sponsor / collaborator, most active players (in terms of number of registered trials), and geography.

An analysis highlighting the key opinion leaders (KOLs) in this domain, featuring an analysis of the various principal investigators of clinical trials related to TCR-based therapies, considering them to be KOLs, who are actively involved in R&D of TCR-based therapies. In addition, it compares the relative expertise of KOLs based on a proprietary scoring criterion with that of a third party.

Detailed profiles of marketed and mid to late stage TCR-based therapies (phase I/II or above). Each profile features an overview of the therapy, its mechanism of action, dosage information, details on the cost and sales information (wherever available), clinical development plan, and key clinical trial results.

An analysis of the recent partnerships inked between several stakeholders engaged in this domain, covering R&D agreements, license agreements (specific to technology platforms and product candidates), product development and commercialization agreements, manufacturing agreements, clinical trial collaborations, product supply management agreements, joint ventures, and others, companies involved, type of therapy, prominent product candidates involved and regional distribution of the collaborations.

Details on the various funding and investments that have been made into companies having proprietary TCR-based products / technologies, including seed financing, venture capital financing, capital raised from IPOs and subsequent offerings, grants, and debt financing. It includes a detailed analysis of the funding instances that have taken place in the period between 2005 to 2022, highlighting the growing interest of venture capital (VC) community and other strategic investors in this domain.

An in-depth analysis of patents related to TCR-based therapies, filed / granted till 2022, based on several relevant parameters, such as type of patent (granted, patent applications, and search reports), patent publication year, geographical distribution, Cooperative Patent Classification (CPC) symbols, emerging focus area, type of player, leading player (in terms of number of patents), and patent

benchmarking. In addition, it features a patent valuation analysis, which evaluates the qualitative and quantitative aspects of the patents.

Case study on cell therapy manufacturing, highlighting the current challenges that exist in this domain, and the pre-requisites for owning and maintaining cell therapy manufacturing sites. Additionally, it includes a detailed list of various cell therapy manufacturers, covering both contract manufacturing organizations and companies with in-house manufacturing capabilities. For the players mentioned in the chapter, we have included details on location of various manufacturing facilities, the products being manufactured, scale of operation and compliance to cGMP standards.

Views on the various factors that must be taken into consideration while deciding the prices of cell-based therapies. It features discussions on different models / approaches that a pharmaceutical company may choose to follow to decide the price at which their TCR-based therapy product can be marketed. Additionally, we have provided a brief overview of the reimbursement consideration for TCR-based therapies.

An elaborate discussion on the future commercial opportunity offered by TCR-based therapies. It provides a comprehensive market forecast analysis for TCR-based products that are approved or are in phase I/II and phase II of development, taking into consideration the target patient population, existing / future competition, likely adoption rates and the likely price of different therapies. The chapter also presents a detailed market segmentation, based on target indication (nasopharyngeal carcinoma, multiple myeloma, head and neck carcinoma, sarcoma, melanoma, acute myeloid leukemia, lung cancer, ovarian cancer and merkel cell cancer), target antigen (NY-ESO-1, EBV, gp100 and others), key players, and key geographical regions (North America, Europe, Asia Pacific, Latin America, Middle East and North Africa, and Rest of the World).

Key Market Companies

Adaptimmune Therapeutics

Alaunos Therapeutics

Bristol Myers Squibb

Cellular Biomedicine

Gilead Biosciences

GlaxoSmithKline

Immatics

Immunocore

Lion TCR

Takara Bio

Zelluna Immunotherapy

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