Dendritic Cell and Tumor Cell Cancer Vaccines Market, 2016-2030

Description: The Dendritic Cell and Tumor Cell Cancer Vaccines Market, 2016-2030 offers a comprehensive analysis of the current market landscape and future outlook of the growing pipeline of products in the therapeutic vaccines segment of the immuno-oncology domain. Currently, there are five types of such vaccines; these are dendritic cell vaccines, tumor cell vaccines, antigen / peptide vaccines, DNA vaccines and anti-idiotypic vaccines. This report is focused on the recent developments and the future potential of dendritic cell vaccines (dendritic cell loaded vaccines) and tumor cell vaccines (tumor cell loaded vaccines).

During the course of our study, we identified a variety of dendritic cell and tumor cell cancer vaccines across various stages of development. More than 75% of these product candidates are currently in the clinical stages of development. With a rich development pipeline, this segment of the immunotherapy market has managed to capture the interest of several strategic investors and venture capital firms. During our research, we observed that over USD 1.5 billion has already been invested in this domain in past five years. Owing to the existing unmet demand for safe and effective cancer therapies and given the innate advantages of immunotherapies, we believe that dendritic cell and tumor cell cancer vaccines present lucrative opportunities for both therapy developers and investors alike.

One of the key objectives of the report was to understand the primary growth drivers and estimate the future size of the market. For this purpose, we took into consideration the following parameters:

- The dendritic cell and tumor cell vaccines pipeline, including marketed, clinical and preclinical therapies, in terms of phase of development, key players, type of donor and target indications.
- The existing and emerging technology platforms used for the development of innovative variants of cancer vaccines.
- The partnerships that have taken place in the recent past covering clinical trial collaborations, research collaborations, manufacturing and services agreements, license agreements specific to technology platforms and agreements related to the co-development and co-commercialization of promising candidates.
- Various investments and grants received by companies focused in this area including capital raised from IPOs and subsequent offerings.
- The performance of competing drug classes, complex manufacturing processes, batch-wise variability and other inherent threats to growth of the market in the short and long term.

The report offers comprehensive profiles highlighting developmental history, clinical trial details and key clinical results as well as the future market opportunity for marketed and late stage (phase III) candidates. This opportunity is linked to the target consumer segments, likely adoption rate and expected pricing. We have provided an estimate of the size of the market in the short-mid-term and long term for the period between 2016 and 2030. The base year for the report is 2016. To account for the uncertainties associated with the development of novel therapeutic classes and to add robustness to our model, we have provided three forecast scenarios portraying the conservative, base, and optimistic tracks of the market’s evolution.

Example Highlights

- Over 60 dendritic cell and tumor cell cancer vaccines are currently in clinical / preclinical stages of development; 70% of the pipeline comprises of dendritic cell cancer vaccines.
- 86% of the pipeline therapies are being developed as treatment options for solid tumors, including lung cancers, glioblastoma, prostate cancer and melanoma. In fact, two of the three marketed dendritic cell vaccines, PROVENGE® and TAPCells® (Chile), are approved for treatment of prostate cancer. In addition, a dendritic cell vaccine is also being developed as a first targeted therapy for the treatment of glioblastoma multiforme, the most common and aggressive form of brain cancer with poor survival rates.
- The innovation in this emerging field is largely driven by smaller firms, specifically start-ups. Notable examples of small firms and start-ups include (in alphabetical order) Asterias Biotherapeutics, AVAX Technologies, DCPPrime, Gradalis, Heat Biologics, ImmunoCellular Therapeutics, Immunicum, MolecuVax, Northwest Biotherapeutics, PDC*line Pharma, Pique Therapeutics, Regeneus, Tessa Therapeutics, Vaccinogen and XEME Biopharma. These companies have developed technology platforms that enhance the efficacy of therapeutic vaccines. Examples of some novel technology platforms include (in alphabetical order) AGGREGON™, DCOne®, ImPACT and Vigil®.
- Several strategic investors and venture capitalists have strongly backed the potential offered by this
domain. We identified over 125 instances of funding over the last few years. The total amount invested has been close to USD 2.0 billion; of this, USD 1.5 billion came during the last five years alone.

- Several agreements have been inked amongst the stakeholders over past few years. We captured over 100 partnerships that are categorized across product development / commercialization agreement, manufacturing / supply agreement, service agreement, technology acquisition / licensing, clinical trial collaboration, research collaboration and others. Of these, clinical trial collaborations and technology acquisition / licensing together account for close to 50% share.

- Prominent academic players, including (in alphabetical order) the Dana-Farber Cancer Institute, King's College London, Mary Crowley Research Cancer Center, MD Anderson Cancer Center, University of Chile, and University of Pennsylvania, have entered into research collaborations with industry players to conduct further research for the improvement of existing therapies and the development of novel technologies.

- Overall, the dendritic cell and tumor cell cancer vaccines market is expected to grow at a healthy annual rate of 20.7% till 2030. Dendritic cell vaccines are likely to garner the most attention in near future. Post 2020, we expect tumor cell vaccines to begin to actively contribute to the market's revenues primarily driven by approval of Vigil®.
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