Non-Tyrosine Kinase Inhibitors in Oncology, 2015 - 2025

Description:

Over decades, the oncology market has been led by surgery, chemotherapy and radiotherapy. The non-specificity of chemotherapy/radiotherapy and limitations of surgery has expanded the focus of many pharmaceutical companies to improve these treatments as well as discover novel cancer therapies with minimum toxic effects.

Targeted cancer therapy is an upcoming area gaining strong foothold in the industry and has already become the focus of a number of pharmaceutical companies. Different types of drugs/antibodies and mechanism of actions have been adopted to specifically target the cancer cells. Small molecule protein kinase inhibitors are a type of targeted therapy that involves small molecule drugs administered in the cancer patient for specifically targeting certain proteins, called kinases, involved in the growth of cancer cells. The approach can be broadly subdivided into two drug classes: tyrosine kinase inhibitors and non-tyrosine kinase inhibitors. The market currently is led by the former; however, several drugs are being developed to target non-tyrosine kinases such as mTOR, CDK, MEK and RAF.

In fact, non-tyrosine kinase inhibitors have gradually gained attention in the last few years. Amongst the marketed drugs, Nexavar and Afinitor have already achieved blockbuster status. With several new drugs under development, companies are also evaluating combination therapies of marketed drugs for the approved or additional oncological indications.

Apart from the bigger pharmaceutical companies such as Roche/Genentech, Eli Lilly, Novartis, Pfizer, AstraZeneca, several smaller/ start-up companies have shown their participation in this area. As the industry gains momentum, many companies have already benefitted by adopting the strategy of discovering the compounds and then out-licensing to bigger companies.

The "Non-Tyrosine Kinase Inhibitors in Oncology, 2015-2025" report provides a comprehensive analysis of the current market landscape and the future outlook of kinase inhibitors not specifically targeting tyrosine kinases. These include kinase inhibitors with activity against serine/threonine kinases, dual specificity kinases or both tyrosine and serine/threonine kinases being developed for oncological indications. Targeted therapy, specifically small molecule protein kinase inhibitors, has emerged as the new generation of cancer treatment that specifically targets only cancer cells. Although the market of protein kinase inhibitors is dominated by tyrosine kinase inhibitors, non-tyrosine kinase inhibitors (serine/threonine kinase inhibitors, dual specificity kinase inhibitors and drugs that inhibit both tyrosine and serine/threonine kinases) have gained a significant momentum in the last few years. There are total seven marketed non-tyrosine kinase inhibitors approved so far. Nexavar, the first drug of this type, received approval in 2005. Subsequently, Torisel (2007), Afinitor (2009), Zelboraf (2011), Tafinlar (2013), Mekinist (2013) and Ibrance (2015) were approved. The pipeline is rich and holds a significant potential for future.

Most of the non-tyrosine kinase inhibitors identified during our research target mTOR, CDK, RAF and MEK kinases. In addition, there are several novel non-tyrosine kinase inhibitors under development that target other serine/threonine and dual specificity kinases (e.g. PLK1, ERK, PIM, Chk kinases).

The report covers various aspects such as key players, marketed non-tyrosine kinase inhibitors, products in clinical / pre-clinical research, associated patents, likely future developments and upcoming opportunities for a variety of stakeholders. With the seven marketed drugs and several in late stage of development, the market is expected to grow at a healthy rate in the coming few years. The report elaborates and provides detailed sales forecasts of many promising drugs for the period 2015 - 2025. Owing to the relatively niche nature of the market, we have provided three market forecast scenarios to add robustness to our model. The conservative, base and optimistic scenarios represent three different tracks of industry evolution.

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