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Cell culture is becoming the **next big pharmaceutical trend**, as laboratories rush to meet demand for stem cell and biologics, states a new report by healthcare experts GBI Research. The new report* looks at cell culture, which involves the isolation of animal or plant cells, for their growth in an artificial environment where conditions such as temperature and pressure are all controlled.

Manufacturing of biopharmaceuticals involves cell culture methods, and the growing trend for biologics will boost the demand for cell culture processing. Biopharmaceuticals are target-specific molecules which are less toxic and more effective than small molecular entities, and are in high demand for the treatment of cancer, diabetes, and arthritis, attracting the focus of many major pharmaceutical companies.

Due to their unique method of development, biopharmaceutical products are not easy to be imitated by generic forms. R&D in the sector is largely devoted to deriving novel mechanisms of action, and increasing access to newer treatments to produce potential cures and improve the quality of life for people suffering from various diseases and conditions. This focus helps in generating better treatment options and earning higher revenues for pharmaceutical and biotechnological companies. The development and manufacturing of these biological products is directly related to the growing demand for cell culture.

Stem cell research also has enormous potential for cell culture. Cell culture methods ensure standardized production and propagation of highly purified stem cells and their differentiated progeny. Conventional therapies manage the disease symptoms, while stem cell therapies treat the cause of the disease, and from a commercial perspective this deficit of curative treatments in conventional therapies makes stem cell research a potential goldmine. In the past few years, stem cell research has gained more importance in cancer research, though the technique still faces many unresolved risks including the uncontrolled proliferation of transplanted cells and transmission of infectious agents.

The cell culture market has more than 90% of its products manufactured by a small number of players, including EMD Millipore, Life Technologies Corporation, Sigma-Aldrich Corporation and Thermo Fisher Scientific Inc. A significant number of small players are also entering into the market, especially in emerging countries. However, tough industry regulations limit the speed at which these companies can progress. The cell culture process requires precise handling, with any changes affecting the safety and efficacy profile of the final product. As a result of this, the processes used for cell culturing are constrained by strict controls, which slow down development and act as a bottleneck to progression in cell culture processing techniques.

The global cell culture market was worth $3.4 billion in 2011, and is expected to grow at a Compound Annual Growth Rate (CAGR) of 9.3% between 2011 and 2018 to reach $6.3 billion in 2018.

* Cell Culture - Rising Demand for Biologics and Growing Visibility of Approval Pathway for Biosimilars will Create Growth Opportunities