

## Medical Device Innovations in Indian Biomedical Research

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One of the most advancing fields in biomedical research is medical devices. The Indian market is presently rated at 5.6 billion USD. India is among the top 15% global market and among the 3rd in Asian countries. The health sector and Indian government aim to see an average growth of 45 billion USD by 2025. The Indian industries have involved in manufacturing mid to low-end products and the majority being imported internationally. Certain aspects of quality, integrity and regulatory concerns are the major reasons. In turn big innovator companies have outgrown taking over the small companies creating a newer avenue. Indian government along with the Indian council of medical research (ICMR) have framed certain flexible policies cutting down time-consuming paper-work in the regulatory perspectives that have even encouraged the Indian origin companies as well. The government has even ensured to implement measures to aid and encourage the research, development, along with manufacture/import of medical devices. The majority of national reputed universities like IITs and NITs have scaled up focusing on research and development. But still, price control and existing of multiple regulators in the market are major hurdles that need to be overcome by the medical device companies in India.

Medical devices cover a diverse sector ranging from surgical to orthopedic, prosthetic, imaging, dental or electro-medical types of equipment. The scope remains wide and challenging. While efforts to upbring the research and development in the medical device

sector of India needs more attention. It would be a feasible option to have ownership of technology and scale up instead of import or implementing the technology under intellectual surveillance. The grey areas still exist with unmet medical needs that can be addressed with biomedical advancements. The Indian government still needs to create a cluster and incubation center bringing various stakeholders of biomedical research to innovate the medical devices. Of course, this needs a great allocation of funds but still possible with little contributions yearly. The non-clinical trials can be validated so that the products can be translated into clinical settings. Stringent post-marketing surveillance regulations are yet to be framed in current medical technology fields in India. The future of any technology always dependent on the footprints of the foundation laid imaging the broadness of novelty, innovation and industrial application especially in the biomedical arenas.

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