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Empowering the Indian biosciences fraternity through self-reliance

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On the verge of completing five decades in the biotechnology industry, Mumbai-based HiMedia Laboratories was one of the prominent players during the global fight against COVID-19. After overcoming all the challenges brought about by the pandemic on the nation and on the industryâ??s growth, the company is now set to venture out into new areas towards portfolio expansion and greater opportunities. During a detailed conversation with BioSpectrum, Dr Gangadhar M Warke, Founder, Chairman and Managing Director, HiMedia Laboratories talks about the companyâ??s growth plans and the future of the Indian biotechnology sector.



In the last two decades, HiMedia has diversified into 7 business divisions that include Microbiology, Cell Biology, and Molecular Biology. What new plans are in store for the company's growth, and what are the revenue projections for FY 23-24?

HiMedia ventured into the microbiology services and training sector this year. Our microbiology division has started providing a wide range of services: microbial identification by MALDI-TOF MS, antimicrobial susceptibility testing, quality testing of disinfectants, bacterial endotoxin testing, strain development and improvement, customised media development, etc. We provide training courses for microbial counts, pathogen detection, environmental sampling, water testing, bioburden tests, etc. We have set up our own Gamma irradiation facility to facilitate sterilisation in-house.

For Microbiology, with respect to USFDA regulations, there was an acute need for production of Ready Prepared Media (RPM) plates & other liquid media. Our RPM product range is extensive and covers many applications. These products are manufactured in numbers of 1.5 lakh units per day in our state-of-the-art WHO-GMP compliant facilities.

For the cell biology division, we are currently focusing on cutting-edge research and new product development for bioinks and bioscaffolds for 3D bioprinting; serum-free media for cultured meat, viral vaccine production platform, cell culture; biosimilars and monoclonal antibodies as anti-cancer therapy; multicompendial biochemicals; and automation. Our latest achievement has been the development of serum-free media for many applications and chemically defined serum- NuSera^{TM} for reducing the batch-to-batch variation and enabling consistency in the results.

Our biosimilars project has been awarded a grant from both NBM-BIRAC (National Biopharma Mission- Biotechnology Industry Research Assistance Council) and DBT-BIRAC in 2020 for development of serum-free, chemically defined media for monoclonal antibodies-mAbs (produced using CHO cell lines) and non-mAb protein therapeutic molecules.

As a new initiative now, we provide Custom Testing Services for drug screening, cell line authentication, scaling up of cells, mycoplasma detection in cell lines, and bioproduction platform (spent media analysis, media development and media optimisation by scaling up). Alongside, we provide teaching and skill development modules for understanding karyotyping, and cytogenetics.

Our molecular biology division takes pride in becoming the One-Stop Shop for all the molecular biology products. Lately, we inaugurated an advanced sequencing and bioinformatics facility that provides services for Sequencing (Sanger and NGS for microbial identifications); Genotyping; Omics (Proteomics, Genomics, and Transcriptomics); and Bioinformatics. We have also developed indigenous solutions in complete forensics processes for humans and wildlife. This process involves novel IT software-based on Forensic Human Identification for the increasingly growing Forensics and Molecular Diagnostics Sector in India. We also have begun to provide teaching kits on the basic experiments of various life sciences fields.

Revenue projections for FY 22-23 are around Rs 950 crore. Expected growth in new Fiscal year 23-24 is around 25 per cent taking our total revenue to Rs 1200 crore. We have also ventured into an ambitious agro-based project, which may boost the revenue further by approx. 60 per cent.

Are you looking at new investments, facility expansions or partnerships to expand your business?

As a rapidly diversifying biotech company, we are looking for new investments. As HiMedia has expertise in different aspects of biotechnology, we want to convert this expertise into our service provision segment. As mentioned prior, we have expanded our portfolio by launching various Advanced Services in Microbiology, Molecular Biology, and Cell Biology. Any diversification needs additional capex for facility build-up and investing in advanced instruments and biological resources. We have invested about 10 per cent of the FY-21-22 profit in these new segments such as probiotic innovation facility at Nagpur, genome sequencing service, Maldi-TOF Mass Spectrometry (MS) services for identification of microbes, 3D bioprinting and Liquid chromatography–mass spectrometry (LCMS).

We are also involved in partnering with academic or research institutions to develop new technologies or processes. Recently, we also got a tech transfer of diagnostic technology from Bhabha Atomic Research Centre. We are expanding facilities to increase production capacity and improve efficiency. This involves building new facilities, upgrading existing ones, implementing automation or other technological advancements. We are setting up a C-GMP manufacturing facility at Nashik with the capacity of 20 tonnes per batch of cultured media.

One of our recent projects revolves around drug repurposing to deal with genetic diseases like sickle cell anaemia. We are also venturing into pre-biotics, probiotics, and post-biotics for humans, livestock, and agricultural crops. We are also venturing into indigenous agar manufacture in collaboration with CSIR – Central Salt and Marine Chemicals Research Institute, Bhavnagar. The Microbiology division had received BIRAC-Biotechnology Industry Partnership Programme (BIPP) grant for developing Bacterial hydrocolloid.

What are your views on pushing the concept of 'Make in India' in the biotechnology sector?

Since the inception of HiMedia in 1974, it has been practising 'Make in India' to build a strong substitute to the MNCs. We have been successful in many areas till now. 'Make in India' is a continuous process, and we are proud that we are part of this to make India stronger. As we know, India is among the top 12 destinations for biotechnology worldwide and 3rd largest destination for biotechnology in the Asia Pacific. In 2022, India’s Biotechnology industry crossed $80.12 billion, growing 14 per cent from the previous year. The Indian Bioeconomy has witnessed a many-fold increase in valuation in the past ten years; with COVID-19 giving the industry a much-needed push. For me, pushing the idea of 'Make in India' in biotechnology (encompassing Microbiology, Cell biology, Molecular biology and Plant tissue culture) field means making the Indian market a reliable source of various raw materials substituting foreign imports.

What are the current challenges facing the biotechnology industry, and what is the way forward?

The biotechnology industry faces several challenges, both technological and regulatory. European regulators upgrade their regulatory compliances every year and impose the same on all biosuppliers. These put challenges on biosuppliers and importers in India. Biotech companies often must navigate complex regulatory environments, especially when it comes to getting regulatory approval for their products. The regulatory process can be lengthy, expensive, and unpredictable. Moreover, biotech companies rely heavily on patents to protect their products and innovations. Biotech research and development can be extremely expensive, especially in areas like drug discovery and development. This makes it difficult for smaller companies to compete with larger companies that have more resources.

To overcome these, biotech companies can either collaborate with each other or academic and research institutions to share resources, knowledge, and expertise. This can help to reduce costs and accelerate the pace of innovation. For example, we have been collaborating with two German partners in our Indo-German [IGSTC 2+2] project. ICT-Mumbai is our Indian academic partner.

Moreover, biotech companies should continue to invest in research and development to stay ahead of the curve. By embracing new technologies and exploring new areas of research, companies can stay competitive and create new opportunities for growth. In India, government funding agencies are supporting such innovation through significant funding apart from private funding. Biotech companies can diversify their portfolios to reduce risk and increase revenue streams. This can involve expanding into new markets or developing products in different therapeutic areas. Overall, the biotechnology industry faces several challenges. However, by adopting a collaborative, innovative, and progressive approach, companies can overcome these challenges and continue to drive growth and innovation in the field.

If we consider the past financial year, pharma exports declined to some extent due to various reasons. This affected HiMedia as well. We foresee that it will improve this year.

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