

“There is a need for more innovations in the way healthcare is delivered at the point-of-care level”

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The reimagination of health systems in India is turning towards a central role being played by point-of-care tests that are accessible and affordable, to enable early detection and timely treatment of a number of diseases impacting India. This not only includes the current monsoon related spike in malaria cases that has surged by 40 per cent over last year's count, but also makes us reflect upon the fact that for the majority of tuberculosis (TB) testing, age-old microscopy technique still holds a major share. Addressing this demand for high-quality, point-of-care molecular diagnostic systems that is higher than ever today, Goa-based in-vitro diagnostic company Molbio Diagnostics is accelerating work on newer technologies. In conversation with BioSpectrum, Sriram Natarajan, Director and Chief Executive Officer, Molbio Diagnostics spoke in detail about the country's healthcare challenges and the company's contribution in attending to those challenges with novel ideas.

What is in store for Molbio Diagnostics in FY 23-24 and beyond?

We've acquired a majority stake in Prognosys Medical Systems, a renowned digital health company and manufacturer of a wide range of Digital X Ray machines including portable and Ultra-portable machines. In addition to opening up Molbio's entry into the radiology segment, this enables us to provide end to end solutions for tuberculosis (TB) elimination, using the artificial intelligence (AI) powered X-ray for screening high risk population and Truenat for same day confirmation and reporting. This active case funding approach helps detection of TB and other pulmonary conditions even in asymptomatic cases thus closing the gap of 'the missing millions'. We have also entered into a collaboration with SigTuple to jointly develop an AI-enabled point-of-care, portable digital microscope for various haematology applications including complete blood count (CBC). This will enable universal access to these basic tests for early and accurate diagnosis at the point of care.

How do you foresee the growth of AI in the diagnostics industry? What challenges might you encounter while working with new and emerging technologies?

AI is poised to play a significant role in the diagnostic industry. While currently the major application is focused on Image Analysis, this will extend to practically all diagnostic solutions to improve performance and efficiency and reduce errors. The current data protection rules, clinical validation protocols, regulatory framework all need to evolve in parallel for more efforts and faster uptake of this tool.

Molbio has also put its focus on blood disorders such as sickle cell anaemia and thalassemia. What are the strategies planned out to improve detection and treatment of these conditions? What about other blood related disorders in India?

One of the companies we are collaborating with is Shanmukha, a startup at the Indian Institute of Science (IISc) and developers of the high-performance optical spectroscopy (HPOS) technology for Sickle Cell and thalassemia. We are working together to further simplify this technology and increase its scope to other haemoglobin disorders.

How much revenue was generated during FY 22-23? How much growth is expected this fiscal? Are you planning new investments to develop new products?

Molbio generated a revenue of about Rs 350 crore in the year 2022-23, a significant fall from the previous two years. This was because of a steep fall in COVID testing and the slow recovery of testing for TB and other diseases. The current year is seeing a full recovery and the revenue is expected to return to the previous levels. While our R&D is working on many new projects, we continue to collaborate with like-minded startup companies for joint development and commercialisation.

Is 2023 a difficult target with regard to the Centre's TB elimination plan? How is Molbio working in this direction?

The programme has to focus on replacing the poor sensitive smear microscopy with molecular test as the front line test. In spite of rolling out Truenat and CBNAAT since many years, majority of TB testing still happens with microscopy. There is also a need to increase active case finding to rope in the missing symptomatic and asymptomatic patients in the population as these are all people who continue to spread the disease. While Truenat continues to be the only point-of-care technology for replacing microscopy at the peripheral centres, with the Prognosys acquisition, Molbio is now able to offer end to end active case finding solutions, both fixed and mobile. Molbio is also collaborating with Docturnal on their cough based voice vocalisation technology and Stellar Diagnostics on their serological Triage test to further strengthen mass screening efforts.

How is the point-of-care testing space evolving in India?

Point-of-care testing is still in nascent stages with few programmes like TB and sickle cell gaining focus. However, considering that over 80 per cent of the population still does not have timely access to basic testing, the need is huge. While lack of funds is a major limiting factor, there is a need for more innovations in the way healthcare is delivered at the point-of-care level. Molbio is currently working on innovative technology based approaches that could be viable and replicable options.

Could you share more details about your recent collaboration with CrisprBits for launching innovative CRISPR-based point-of-care tests?

We have collaborated to leverage the capabilities of both organisations to accelerate the development, validation and delivery of impactful point of care tests. The synergy derives from a common focus on nucleic targets for diagnostics.

Is the concept of gene editing slowly making a mark in the biotech industry in India?

Gene editing is used extensively in contract research services for cell lines and creating transgenic models for experimental work. Commercial use in bio production has been hampered by complexities of the IP and the freedom to operate. The technology itself is now fairly accessible for well-trained molecular biologists and has to be considered as a one among the tools within a well-trained molecular biologist's kit.

What are your expectations from the government that can improve healthcare in the country?

Healthcare being still largely public sector oriented, funding needs to substantially increase to achieve 'Health for All'. While this can happen to some extent at the budgetary level, mandating a certain percentage of CSR funding to healthcare could be another way.

Market assurance to Make in India startups is essential to promote innovations in the domestic industry.

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