BioSpectrum the business of Bio & Health Sciences

Mission: Technology for diagnostic efficiency

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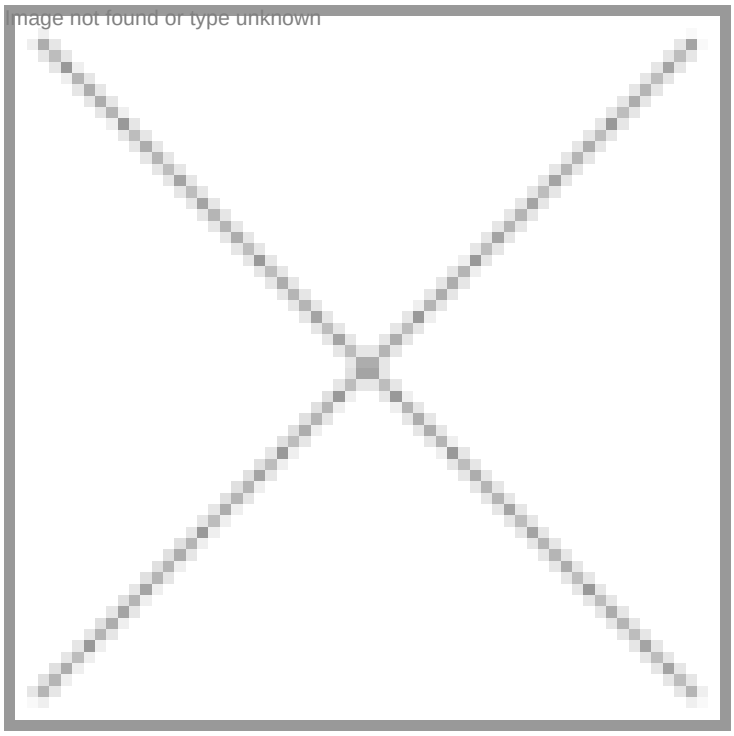

The support from BIPP funding and collaboration with IMTECH Chandigarh, helped Revelations Biotech, Hyderabad, to develop unique technology platforms for rapid detection of nucleic acids, which could help in diagnosis of various diseases on time

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Nucleic acid detection is one of the most reliable ways of disease diagnosis. However, technological limitations are involved in nucleic acid hybridization methods for routine molecular diagnosis. This prompted Hyderabad-based Revelations Biotech to think differently. Revelations developed rapid thyroid stimulating hormone (TSH) quantification technology in-house by employing complex genetic engineering and also made significant progress in developing rapid T3 and T4 quantification systems.

Revelations is developing a unique technology platform with which small amounts of DNA and RNA can be readily detected in a single reaction tube in less than 30 minutes. A genetically engineered protein scaffold was designed to report each probe hybridization event in solution after exponential amplification of signal. Coupling this technology with polymerase chain reaction (PCR) applications will bring out a novel strategy for quantitative detection of nucleic acids. The Biotechnology Industry Partnership Programme's (BIPP) support for this project was timely and added to the confidence of delivering the product within time. Collaboration with the Institute of Microbial Technology (IMTECH), Chandigarh, helped to propel the project ahead of the schedule.

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Dr Ravi Chandra Beeram, MD, Revelations Biotech, said â€œWe harness complex scientific underpinnings from interdisciplinary sciences, such as molecular biology, structural biology and protein engineering, to discover novel technologies. Revelations started with a small team of people with innovative ideas to invest.â€?

Revelations Biotech, which was founded at Secunderabad, now has a state-of-the-art laboratory in the life sciencesincubator of IKP Knowledge Park, Hyderabad. Highly appreciative of the BIPP support, Dr Chandra said, â€œTo fuel innovation, the BIPP is perfectly positioned where the technical screening committee identifies societal needs and partners with industry and further ensures the outcome of R&D.â€?

The way forward

Utilizing these platform technologies, Revelations in collaboration with a Hyderabad-based biotech organization isdeveloping a novel and economical insulin production technology with the aim of making insulin affordable to all sections of the developing and the under-developed world. The company plans to launch a thyroid quantification kit by middle of 2012.

The company also plans to raise the seed capital by offering technology consultancy to one of the big US-based MNCs that has shown interest. The company has been investing in development of technology platforms and the funds required are raised from services, directors' contributions and public funding programs like the BIPP. It also offers macro molecular crystallography services to pharma clients to determine atomic coordinates of small molecule-receptor interactions.

Citing importance of novel healthcare technologies to meet the growing demands and the changing demographic patterns in the developing world, Dr Chandra said, â€œIn the absence of such program, linking innovation to business is difficult in the country.â€?

Rahul Koul in New Delhi