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"C-CAMP focuses on developing high-end technologies"

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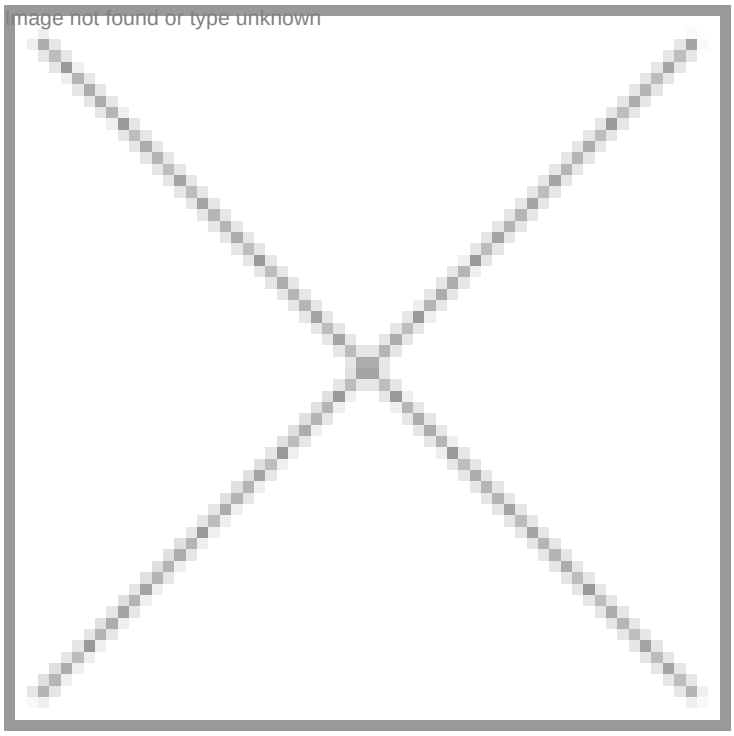

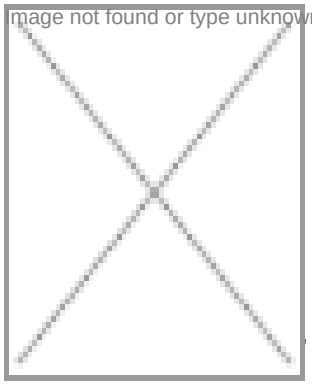

, Bangalore

The Center for Cellular and Molecular Platforms (C-CAMP), a Department of Biotechnology, Government of India initiative, is part of the Bangalore Bio-Cluster that functions with the mission to enhance bioscience research and entrepreneurship by providing research, infrastructure, training and services on state-of-the-art technology platforms.

C-CAMP, National Center for Biological Sciences (NCBS) and the Institute for Stem Cell Biology and Regenerative Medicine (inStem) form the Bangalore Bio-Cluster. NCBS, the parent organization, offers a fertile ground for the two new institutes to flourish by providing support and the necessary scientific and administrative infrastructure. These three entities bring together unique individual capabilities and a shared multi-disciplinary approach to create an interactive bioscience and technology research enterprise. It is envisaged that this integrated vision of the cluster will result in cutting-edge scientific discoveries,

and the translation of these discoveries into tangible technological development in the broad field of life sciences.

In an interview with *BioSpectrum*, Dr Taslimarif Saiyed, director and COO, Center for Cellular and Molecular Platform, shares the activities and future plans of C-CAMP.

Q What are the key activities of C-CAMP?

Dr Saiyed: In life science research, high-end technology and tools are becoming key components in executing laboratory experiments. Hence, accessibility to these high-end technologies can determine the success of any scientific laboratory, organization, or community. Additionally, new technologies, depending on the specificity of the technology and other factors, take time to migrate from the place of its origin to its place of application. This means that users in the place of origin access the technology first, however, users in other places only get to use the technology after a certain delay. This can sometimes be years depending on the exclusivity of the technology. Hence, it is very important for a country like India, which is involved in technology creation, to ensure timely access for its scientific community.

As a key mandate, C-CAMP is involved in working with scientists, entrepreneurs, biotech start-ups, and pharma companies to establish new high-end technologies in the country. C-CAMP is open to interesting ideas from the potential collaborators and is willing to support these ideas at various levels.

The most unique mandate of C-CAMP is to create a group of biotechs in and around the Bangalore Bio-Cluster and support their growth with incubation facilities, services, expertise, and collaboration opportunities. Although this is a more difficult task, it is envisaged that this incubation facility coupled with tailored services and consulting will provide both scientific and non-scientific expertise to an entrepreneur or start-up and allow them to take the individual/firm from an idea to proof of concept and further growth. The non-scientific advice given will include consulting for research and market, due diligence, IP analysis and evaluation, technology transfer, government/ private funding and regulatory affairs.

Q Which technology platforms available at C-CAMP?

Dr Saiyed: C-CAMP has been providing high-end platform technologies and expertise to academic and industry scientific researchers in numerous core platforms:

Confocal and fluorescence microscopy: The central imaging facility provides researchers with access to cutting-edgeplatform technologies in the imaging space. This range of imaging of equipment is currently not available anywhere in India.

Flow cytometry: The facility provides access to high-end flow analyzers and flow sorters to allow high-speed analysis and sorting of cells and organelles. In the near future, we also will have a high-resolution flow sorter to allow efficient sorting of individual chromosomes, a first in India.

Molecular characterization and proteomics: The facility provides researchers with state-of-the-art techniques and equipment to characterize biomolecules with an emphasis on proteins and peptides. We will soon extend this for large-scale screening, identification and quantitation of proteins from complex biological samples.

Transgenic fly facility: The facility offers a world-class microinjection service for the generation of transgenic lines and also, maintains a large number of mutant strains and transgenic lines.

High-throughput screening: For drug design studies, molecular interaction studies or for identifying the role of a particular biochemical process, the facility provides researchers with the ability to quickly identify active compounds, antibodies or genes that modulate a particular biochemical pathway. RNAi-based screens and chemistry-based screens as well as combinations of these are in the process of being set-up at C-CAMP.

Intellectual property management office and technology transfer office: Allow researchers from the Bangalore Bio-cluster to realize the commercial potential of their exciting inventions and innovative research. The IPMO and TTO work with BBC researchers and scientists to protect their IP and commercialize new technologies in collaboration with and through our legal, industrial and commercial partners.

Additionally, C-CAMP is providing IP/patenting advice to other notable institutes in India. The TTO has developed a catalogof innovations coming out of NCBS, which can be used as a tool to attract potential licensees, investors and research partners and thus be able to explore exciting commercialization avenues.

In addition of providing platform technologies, C-CAMP is providing technology training programs to generate a pool of experts who can proficiently utilize high-end scientific technologies available in scientific organizations and hence, helps in

scientific developments.

Q Could you elaborate on the future plans of C-CAMP?

Dr Saiyed: C-CAMP will focus on the development of new high-end technologies and scientific research through multi-disciplinary collaborations. This include next-generation sequencing (genomics) and protein core facility. Additionally, for continuous growth of technology expertise in the country we will provide nation-wide comprehensive training programs with eminent faculty and the latest instruments in the market.

Gradual investment in our human resource stocks will enable us to enhance our technical and management expertise in the area of life sciences. With this enhancement, it is envisaged that C-CAMP will become a life science industry leader in technology platform development and services. We aim to become a unique platform for all scientific researchers to come and discuss their needs, objectives and plans in terms of their research and science.

Narayan Kulkarni in Bangalore