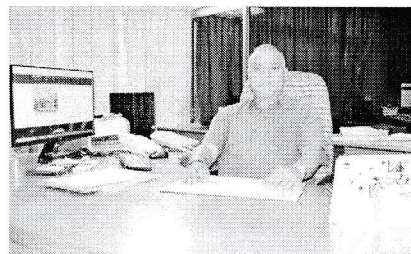


From the Director's Desk



It is my pleasure to present my first Annual Report as Director of the National Centre for Cell Science (NCCS), Pune, for the financial year 2019-20. I would like to take this opportunity to reflect on our progress over the last year and to envision our contribution to the scientific future of India.

Initially established as a National Cell Repository, NCCS serves the nation by maintaining and distributing a large number of animal cell cultures to various colleges, universities and research institutions in India. By doing so, we encourage the pursuit of cell biology in a large number of institutions. We have also created a state-of-the-art infrastructure for the characterization and authentication of cell lines. We take pride in providing this national service, and are continuously working towards upgrading our services.

NCCS has also established the Centre of Excellence, National Centre for Microbial Resources (NCMR), with a special mandate from the Department of Biotechnology (DBT), for the collection, identification, preservation and distribution of microbial cultures from various ecological niches across India. NCCS-NCMR is the the largest individual culture collection in the world, and has been instrumental in facilitating research in microbial ecology in India.

As one of India's leading research institutions, our primary focus is on addressing the current and emerging public health needs, along with striving to provide a better understanding of basic cell biological processes. Over a period, we have expanded our scientific base to research areas that focus on structural and computational biology, proteomics and neurobiology.-. These areas complement and strengthen the previously existing areas of research within NCCS, which focus on understanding the basis of development and progression of cancer, cellular metabolism and intracellular transport, and infectious diseases such as leishmaniasis, AIDS, tuberculosis and malaria. The research activities in the institute are augmented by an excellent experimental animal facility that procures and maintains animals, and provides technical support to the scientists. Other core facilities like the FACS, proteomics, bioimaging, XRD and bioinformatics facilities play an equally important role in facilitating NCCS to be at the leading-edge of research.

Our scientific productivity is reflected in numerous publications in prestigious international journals. In addition to institutional research funds, NCCS scientists have also been successful in obtaining numerous peer-reviewed competitive grants from various national and international agencies. NCCS scientists and students also share their research widely with peers through participation in national and international scientific conferences organized at NCCS and across the globe. We provide an encouraging environment to nurture the scientific curiosity and talent



of graduate students, which facilitates them to shine and be among the best in the country. We also provide them with a platform to hone their skills through rigorous coursework, engaging research, and work seminars to showcase and discuss their work.

It is my pleasure to document here some of our recent major programmes. NCCS has initiated steps towards establishing a GMP-compliant National Repository for banking, safe deposit and supply of characterized mammalian cells for use in biopharma, under the aegis of the National Biopharma Mission. Another mega project involves studying the human microbiome of select endogamous populations of India. NCCS is also involved, along with IISER-Pune, and Persistent Systems Ltd., in spearheading the MANAV Human Atlas programme initiated by DBT to generate a Human Atlas by integrating the knowledge available in the scientific literature. The programme is expected to train large numbers of students to interpret, analyze and annotate data from the scientific literature, using an annotation platform created for this purpose. These major initiatives bear witness to the commitment of NCCS to support the scientific community and society, and to develop public-private partnerships and human resource. NCCS, in coordination with IISER-Pune, has been instrumental in setting up the Pune Biotech Cluster, an initiative by the DBT, to cater to the research needs of academic institutions and private companies in and around Pune.

Moving forward, NCCS will continue to focus on pertinent queries relevant to human health, while adopting cutting-edge technologies such as high throughput screening, cryo-electron tomography and single cell sequencing, for developing a better understanding about, and potential therapeutic leads for diseases.

I invite you to learn more about our research and other activities, which are covered in the annual report that follows.

Dr. Manoj Kumar Bhat
Director

