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IIT Kanpur inaugurates national Cryo-EM facility for structural biology research

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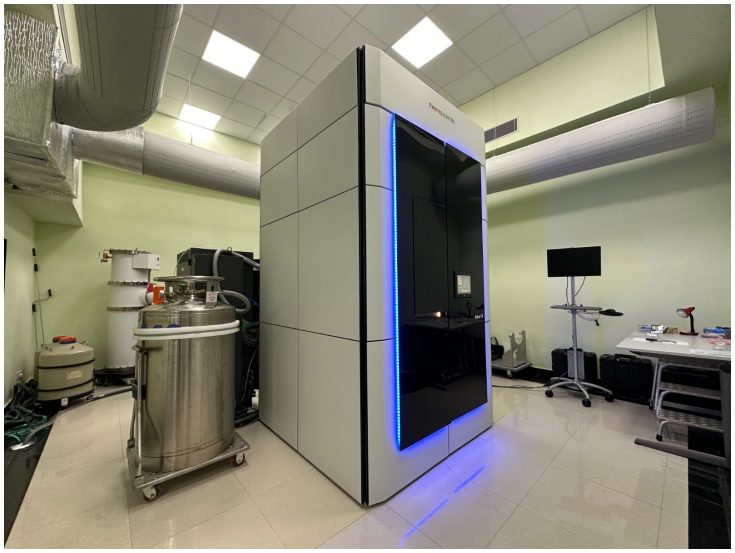
To empower scientists with cutting-edge technology for drug discovery and disease research



In a significant step towards augmenting India's scientific research capabilities, the Indian Institute of Technology Kanpur (IIT-K) has inaugurated its National Cryogenic-Electron Microscopy (Cryo-EM) facility.

The facility, established with support from the Science and Engineering Research Board (SERB), now integrated with the Anusandhan National Research Foundation (ANRF), was inaugurated by Prof. Abhay Karandikar, Secretary, Department of Science and Technology (DST), Government of India, in the presence of Prof. Manindra Agrawal, Director, IIT Kanpur; Dr Dipti Kakkar Thukral, Scientist G, DST ANRF; Dr T Thangaradjou, Scientist F, DST ANRF; and Prof. Shalabh, Dean of Academic Affairs, IIT Kanpur, among others.

Cryo-EM is a revolutionary technology that allows scientists to visualise biological molecules, such as proteins and viruses, in their near-native states and at unprecedented resolutions. This detailed view is crucial for understanding the fundamental processes of life and for designing novel drugs and therapies.

The state-of-the-art facility at IIT Kanpur is a significant milestone in India's pursuit of self-reliance in life science research in line with the Atmanirbhar Bharat vision. It is one of four such high-end facilities in strategic locations across the nation to support research and ground-breaking discoveries in structural biology.

The Cryo-EM facility will conduct research on a vast array of drugs to position it at the forefront of drug discovery and development efforts in India. The facility is equipped with a powerful 300 KV Cryo-EM microscope, sophisticated sample preparation equipment, and advanced computational infrastructure for data analysis.