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JNCASR creates device for monitoring cells & tissues

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This system has broad applications for the research community in biomedical engineering



The need for monitoring of growth patterns of cells over long hours on desired substrates and the functionality of an explant-tissue in a non-vivo environment in their laboratory triggered a team from Bengaluru based Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), an autonomous institute under the Department of Science & Technology (DST), Government of India to come up with a suitable device.

The researchers implemented a 3D-Fluidic device (3D-FD),which has an auto bubble guidance geometry which allows controlled medium exchange to maintain the metabolites without a trace of fluid leakage and bubble formation.

The auto bubble guidance geometry (Helical pathway) and controlled delivery of the medium make it efficient as a drug screening platform and unique in the current scenario of Neuro-Technology.

This system has broad applications for the research community in biomedical engineering to understand how the tissue grows and the physiology development of cell cultures. Also, this device implementation will help in exploring the intricate tissue/cellular environment and dynamic behaviour of cells.