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Premas Biotech secures government's support to advance AXTEX-4D for personalised breast cancer care

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For advancing AXTEX-4D from proof of-concept to a stronger translational stage



Gurugram-based Premas Biotech has received funding support under the Scheme for Promotion of Research and Innovation in Pharma MedTech Sector (PRIP), an initiative of the Department of Pharmaceuticals, Ministry of Chemicals and Fertilizers, Government of India, for its AXTEX-4D™ technology.

The supported project, titled “AXTEX-4D™: Development of Patient-Derived Breast Cancer Organoids for Personalised Chemotherapy Screening,” aims to advance an indigenous 3D tumour organoid system designed to support more personalised and evidence-based chemotherapy selection for breast cancer.

Under PRIP support, Premas Biotech will work toward advancing AXTEX-4D™ from proof of-concept to a stronger translational stage. The project will focus on patient-derived organoid development, molecular and functional characterisation, chemotherapy response testing, and generation of data that can support future clinical validation and broader adoption.

AXTEX-4D™ uses a scaffold-based 3D culture approach, where biopsy-derived cells are grown on a non-woven polymer fibre matrix to form tumour tissueoids. These tissueoids are designed to recreate key features of the native tumour microenvironment, including tumour architecture, cell–cell interactions, oxygen gradients, and drug-penetration barriers. By offering a more physiologically relevant model than conventional 2D culture systems, AXTEX-4D™ has the potential to generate more clinically meaningful drug response insights.