



*Brief of Aims, Objectives and
Facilities at
IITJ Technology Innovation and
Start-up Center (TISC)*



Aims and Objectives:

BIRAC operates a scheme entitled BioNEST (Bioincubators Nurturing Entrepreneurship for Scaling Technologies) in order to provide financial support for establishing BIRAC- BioNEST facility at IIT Jodhpur, Rajasthan, India. It aims

- a) to establish an Incubating Centre to promote India centric affordable intelligent healthcare technologies
- b) to promote the bio-entrepreneurial initiatives of IIT Jodhpur Faculties, students, staff and of allied institute on medical technologies
- c) to promote innovation and entrepreneurship ethos through well-structured experiential learning through academic programs
- d) BioNEST-Bioincubator will provide a nurturing, mentoring platform to the budding companies and handhold them during the difficult phase of initial growth. The institute will provide complete infrastructural support lab facilities during their stay at the Bioincubator
- e) BioNEST Bioincubator will primarily will focus on startups benefitting rural and social systems, largely those allied that enable products and services available for the underserved and bottom of the pyramid segment
- f) co-exsiting facilities of Common research and technology development hub at IIT Jodhpur in the area of AIOT will be utilized to encourage research and technology development relevant for Bio-entrepreneurs
- g) to create, disseminate, apply and conserve knowledge in all allied.

Facilities:

1. Cell Culture Facility
 - a. CO₂ Incubator
 - b. Laminar Air Flow
 - c. Centrifuge for cell culture
 - d. 4°C Refrigerator
 - e. Automated Cell Counter
 - f. Inverted Microscope
 - g. Upright Microscope
 - h. Ice Maker
2. Gel Doc System
3. 3D Bioprinter for Implant Facility or prototype validation
4. Microfabrication, Microchannel and Spin Coating Systems
 - a. Equipment for SU8 mold fabrication with Spin Coater
 - b. Connection kit SU8 station
 - c. Equipment for PDMS fabrication with Plasma Cleaner
 - d. Connection kit PDMS station
 - e. Vacuum pump
 - f. Air compressor

- g. Kit accessories
 - h. Kit chemicals
 - i. Installation and shipping
5. Water Purification System for providing Analytical grade water and cell culture
 6. Refrigerated ultra-centrifuge
 7. High efficiency VUV/UV spectro-radio meter for absolute radiated power measurement
 8. Incubators with shaker
 9. Biosafety cabinet, Refrigerators
 - a. Biosafety cabinet
 - b. Refrigerators (4°C, -20°C, -80°C)
10. General Biolab Facility
 - a. Rocker
 - b. Heat block
 - c. Water bath
 - d. Weighing balance
 - e. pH meter
 - f. Hot air oven
 - g. Gel apparatus
 - h. Western blot unit
 - i. Chiller
 - j. Refrigerated centrifuge
 - k. Vortex
 - l. Autoclave
 11. Food quality testing equipment
 - a. Mocon Permatran for measuring water vapour permeability (Fexitest Water Vapor Transmission Rate Test System)
 - b. MoconOxtran (Flexitest Oxygen Permeability Test System)
 - c. Texture Analyzer (Bio Man India Texture Analyzer)
 - d. Keithley electrometer (Tektronix Conductivity Test System)
 - e. Electrostatics Solutions cell (Hi-Tech)
 - f. Decagon Aqualab water activity meter (Decagon water activity meter)