

Homogenizer (GEA Nirosoavi)

- Ariete NS 3006 Homogenizer with High pressure feed pump.
- Capacity of 50 L/hr at 1500 bar
- Compressed air / chilled water (operation).



TFF System (Bangalore Biotech Labs)



- Tangential flow filtration system for microfiltration / ultrafiltration with max. of 1000 L / hr.
- 10 L vessel with transfer pump.
- Lab scale system with max. 2L / min.

- Ultrafiltration & Microfiltration cassettes.

Lyophilizer (LABCONCO)

- Freezone Lyophilizer (6L condenser) for freeze drying.
- Integrated vacuum pump / accessories.



Ultracentrifuge (Beckman Coulter)



- Optima XPN 100 ultracentrifuge (max 8,00,000 g)
- Fixed angle and swinging bucket rotors.

Plate Reader (Molecular Devices)

- Spectromax Paradigm Multimode microplate spectrophotometer.
- Absorbance, Fluorescence / Luminescence detections with endpoint and kinetic analysis.



2D Electrophoresis (GE Life Sciences)



- Ettan IPGPHOR 3 Isoelectric focusing unit for first dimension electrophoresis.
- SE 600 Ruby for second dimension electrophoresis.
- Image Quant LAS 4010 gel documentation system and Image Master.



Real Time PCR (Life Technologies)

- Steponeplus Real Time PCR with 4 colors for multiplexing.
- 96 well format for 0.1 ml tube with LED excitation source.

Fluorescence Microscope (Nikon)

- Upright microscope with Epifluorescence attachment.
- Digital Camera Analysis Software.



Common Equipment

- | | |
|--|---------------------------|
| • Gel Electrophoresis System with Gel documentation unit | • Rotavapour |
| • Refrigerated Centrifuges | • Autoclaves |
| • Thermal Cycler | • Sonicator |
| • Vacuum concentrator | • Electroporator |
| • CO ₂ Incubator | • Fluorescence Microscope |
| • Deep Freezer (-80°C) | • Cell Counter |
| | • Cold Room |

EQUIPMENT USER CHARGES & TERMS OF ALLOTMENT (EXCLUSIVE / NON-EXCLUSIVE)

Equipment Usage Charges

- Consumables and chemicals / reagents have to be sourced by the clients.
- Usage charges to be paid in advance with GST extra.
- Booking form to be filled for allotment of equipment in advance.

Incubation Space(BTCIF)

- Fully furnished lab space in BTCIF is available for Rent at INR.40/Sq.ft./month & Other (O&M, A/C, Electrical) charges at Actuals.

PLEASE SEE OUR WEBSITE FOR DETAILS

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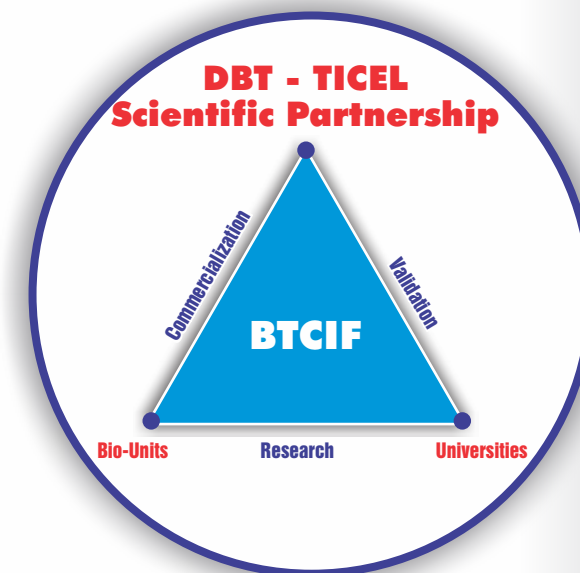
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TICEL BIO PARK LTD.
(TIDCO Centre for Life Sciences)

Bio Technology Core Instrumentation Facility (BTCIF)

Initiative of TICEL, TN Govt. & DBT, GoI
to make Chennai as Global Bio Tech Hub



A state-of-the-art high end Equipment & Labs (BSL2 /BSL3)
for Microbiology / Molecular Biology / Fermentation,
Downstream Processing, Analytical and Cell Culture
for the benefit of Scientific Community.



GLOBAL TAMIL NADU
Perfect Indian Destination for Life Science Ventures



2019

Biotechnology in Tamil Nadu, India

- Tamil Nadu is rich in biological resources with forest cover of 52,500 sq.km, plant resources of 5,000 species and 1,000 km coastal line.
- Large pool of scientific talent - IIT, Anna University, University of Madras, Agricultural University, Veterinary University, etc. and 630 Engineering Colleges, 500 Polytechnics and 1,600 Industrial Training Institutions.
- Biotech units - National Biodiversity Authority, Actavis, Histogenetics, HLL Biotech, Vistakon, Hyoshi Services, Evolva Biotech, SGS India, Johnson & Johnson, Medical Park, HBL, Hospira, Gencor Organics, Athenese Dx, Saksin Life Sciences, Datri Stem Cell, Intertek, Levim Biotech, BCGRC, Axiogen Biotech, V Clinbio Labs Pvt. Ltd., etc.
- Corporate Hospitals - Apollo, Madras Medical Mission, MIOT, Ramachandra, Chettinad, Sankara / Agarwal Eye Hospitals, M.V. Diabetics, etc. for research on medical devices, Medical Bio.
- Strength of Information Technology provides BT / BTES Application.

Tamil Nadu Biotechnology Policy, 2014

- Vision 2023 of Tamil Nadu Government identified Biotechnology as sunrise sector for creating scientific and research networks for commercialization.
- Bio Policy 2014 proposes National Centre for Excellence / Bio R&D Institute, Bio IT Park, Medical Bio Industrial Cluster, Bio Research Fund, Biotech Venture Capital Bio Parks/Bio Incubators in Tier II Cities, Viz. Coimbatore, Madurai, Trichy, etc., Single Window Facilitation.

Biotechnology Core Instrumentation Facility (BTCIF)

- Government of India and Government of Tamilnadu jointly established BTCIF, the first of its kind in India as a model project at a cost of INR193 Million in TICEL for providing scientific supports with high end equipments and carrying out their research / investigations by Industry / Entrepreneurs for Commercialization.
- Value added services of BTCIF include, Technical / Analytical, Incubation, Mentoring and Training support in collaboration with Universities / Institutions.

BTCIF Layout

- BTCIF facility has ISO 7 cleanrooms for Purification, Microbiology, Molecular Biology, Tissue Culture and all labs conforming to ISO 8.
- Cleanrooms are equipped with dynamic passboxes for sterile material transfer.
- The labs are designed for unidirectional flow with separation of clean and dirty corridors suitable for microbial process.
- Dedicated AHUs for cleanroom zones.

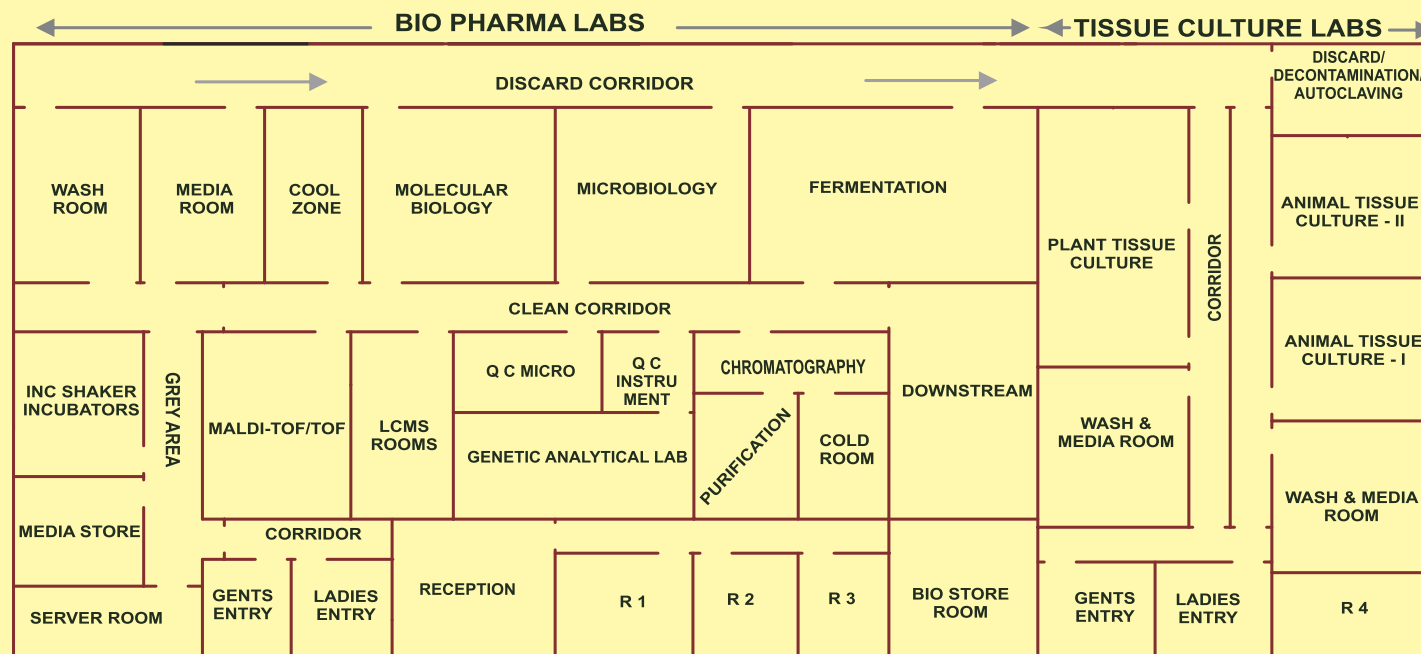
Facilities

- Microbial Fermentation & Downstream Processing Zone with Microbiology and Molecular Biology labs.
- Analytical wing.
- Tissue Culture Zone for Animal & Plant Cell Cultures with independent wash rooms.

Utilities

- RO Water, Compressed Air & Effluent Treatment.

BTCIF - LAYOUT



Major Equipment at BTCIF

Fermentors (Sartorius Stedim)

- 5L, 40L & 100L for batch / fed batch microbial cultivation with PLC – SCADA control system.
- Sterilization / Temperature control with Electrical Steam Generator.
- Air compressor / chilled water for fermentation process.



Chromatography (GE Life Sciences)



- Akta Pilot chromatography - Max. flow rate of 800 ml / min in Isocratic mode & 400 ml / min in gradient mode.
- Glass columns - Client specific media packing with buffer.

MALDI TOF/ TOF (Bruker Daltonics)

- Ultraflex extreme MALDI TOF / TOF spectrometer with linear and reflector mode.
- Sample analysis - Accuracy of 1 PPM (internal reference) with mass range up to 700 kDa.
- Nitrogen / Argon gases for sample analysis.



UPLC (Agilent)



- 1290 Infinity quaternary pump UPLC - pressure of 1200 bar at 2 ml / min.
- 1290 Infinity diode array detector for 190 – 950 nm wavelength.

Genetic Analyzer (Life Technologies)

- Ion proton sequencer with Ion proton Torrent server of 27 TB for whole genome sequencing.
- Ion onetouch 2 system for sample preparation / processing.
- Throughput of 10 GB with Ion Proton chip (semiconductor).



Flow Cytometer (Beckman coulter)



- Gallios flow cytometer with 2 solid state lasers.
- 8 color with fluorescence/forward/side scatter detectors.