

BIOLOGY



In vitro Lab



Tissue Processor (Model: HMP 300, Microm GmbH, Germany)

IGR Products

- Alkylxanthates as newer IGR on agricultural pests (3 nos.)

Infrastructure

- Modern insectary
- Mammalian Toxicology Lab
- Microbiology Lab
- Tissue Culture Lab
- Glass House
- Animal House as per GLP norms
- Bioinformatics Lab with super computer PARAM 10000 access
- UV VIS Spectrophotometer
- Micro plate Spectrophotometer
- Video microscope
- Paraffin embedder
- Slide strainer
- Tissue processor
- Liquid scintillation counter
- Climatic chamber
- Autoclave sterilizer
- Laminar Flow Unit
- Ultra centrifuge
- High-speed centrifuge
- Inhalation chamber
- Deep freezer (-95 degrees)
- Ethovision

SPONSORING AGENCIES

National Organizations

- Department of Ocean Development (DOD) Govt. of India

- Department of Science and Technology (DST) Govt. of India
- Department of Biotechnology (DBT) Govt. of India
- Ministry of Communication and Information Technology (MCIT) Govt. of India
- Indian Council of Medical Research (ICMR) Govt. of India
- DRDO, Ministry of Defence, Govt. of India
- Ministry of Environment and Forests, Govt of India
- CSIR

International Organizations

- i2 Technologies, Dallas, USA

Private Sector

- Bayer India Ltd., Mumbai
- RPG Life Sciences, Pune
- Shri Shakthi Alternative Energies Ltd., Hyderabad.
- Transelektra, Mumbai
- Lever Johnson
- IsAgro, Mumbai
- K.N.Biotech, Hyderabad.

CLIENTS FOR MAMMALIAN TOXICOLOGICAL WORK:

- M/s. Shree Shree Telelinks Pvt. Ltd., Cherlapally, Hyderabad.
- M/s. Regent Telecom, Cherlapally, Hyderabad.
- M/s. ITCO Industries Pvt. Ltd., Bangalore.
- M/s. Amar Electronics, Kushaiguda, Hyderabad.
- M/s. Rama-chem, Hyderabad.
- M/s. Surana Telecom Pvt. Ltd., Cherlapally, Hyderabad.
- M/s. Andhra Polymers Pvt. Ltd., Hyderabad.
- M/s. Regent Telecom Pvt. Ltd., Hyderabad.
- M/s. Telecom Industries, Hyderabad.

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BIOLOGY

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Biology Division is a centre for excellence to provide high quality of basic and applied research in Bioinformatics, Entomology, Toxicology and Rural Development with state of art facilities.

VISION AND GOALS

- Bioinformatics
- Rural Development
- Entomology
- Toxicology

CORE COMPETENCIES AND ACTIVITIES

- Information Technology for Integrated Vector Management
- Information Technology for Rural Development
- Bio-Control
- Bio-evaluation of new molecules and natural product extracts employing entomological, toxicological evaluation & profiling
- Eco-toxicological studies
- Standardization of alternate methods for toxicological studies
- Biomarkers as biological indicators of xenobiotic exposure
- Development of alternate methods for pest control
- Studies on insect plant interactions for development of better & safer pest control
- Offering advanced course in Bioinformatics jointly with CDAC & JNTU. For details see the following URL www.iictindia.org/adbi/index.htm

CURRENT RESEARCH AREAS

- Bioinformatics and computational biology
- Environmental management for the integrated vector control & vector borne diseases
- Medical informatics
- Rural development through sericulture, plant tissue culture etc.
- Marine natural product evaluation
- Toxicological evaluations of potential pesticides derived from plant sources
- Isolation of native collagen from marine sponges
- Biocompatible membranes for medical application
- Kairomones for IPM

SERVICES

Biology Division is recognized by Government of India to undertake the following tests:



Liquid Scintillation Counter (Model: LS6500, Beckman, Switzerland)



Bioinformatics Lab

- Insecticidal activity (on mosquitoes, agricultural pests, etc.)
- Bio-efficacy and persistent studies of toxicant on different surfaces
- Anti-bacterial and anti-fungal activity
- Termite testing
- Mammalian toxicity studies (both short-term and long-term) as per gaitonde protocol and OECD Guidelines

CENTRES

- EMCB-ENVIS Node On Bioinformatics - Vector control (World Bank-assisted programme through Ministry Environment & Forests, Government of India), www.envisiict.org
- Biotechnology Information system (BTIS) A National Bioinformatics Network Program on Vectors & Vector Borne diseases (Dept. Biotechnology, Govt. of India).

PRODUCTS AVAILABLE

Software

- Filariasis DBMS 1.1 (Database management system for integrated control of Bancroftian Filariasis of East & West Godavari District of Andhra Pradesh)
- An Integrated Forecasting System for the control of Malaria in Mizoram & Sikkim
- ANOMAS 1.1 (Rapid Identification of Mosquito species)
- SAMADHAN KENDRA (IT for rural development)



Slide Stainer (Model: HMS 70, Microm GmbH, Germany)