

Armats Bio-Analytical Services

Invitro Qualitative and quantities Bioassays

- Antimicrobial activity (Antibacterial, Antifungal, Anti larvicidal, Antiprotozoan,)
- Anticancer activity (viz., Cell lines, Cytotoxicity, MTT assay, DNA fragmentation, Apoptotic Protein expression).
- Antioxidant activity (DPPH scavenging, ABTS scavenging, FRAP, TRAP, Reducing power).
- Anti-inflammatory, Antidiabetic activity.
- Enzyme assays (Qualitative/quantitative, Plate assay screenings, Enzyme kinetics, Enzyme reactors applications studies).
- Poly acrylamide Gel Electrophoresis (SDS-PAGE, Native PAGE, Agarose).
- Enzyme-Linked Immunosorbent Assay (ELISA).
- Southern and Western Blot analysis.

In vitro Phytochemical Analysis

- Total Phenols estimation.
- Alkaloid content estimation.
- Flavanoid content estimation.
- Terpenoid content estimation.
- Saponin content estimation.
- Vitamins and minerals content.
- Nutritional analysis for food samples
- Total Carbohydrate, Protein and lipid content of food samples.
- Total fiber and ash content of food industry.

Protein Purification and Downstream processing

- Intracellular and extracellular protein extraction from Microbial, Herbal Plants, and Animals sources.
- Prorein Precipitation (Salt/solvent/acid)
- Dialysis (Membrane cassette)
- Size Exclusion Chromatography Sephadex G-100 Column Chromatography for enzyme purifications.
- Ion Exchange Column Chromatography for Protein.
- Affinity Column Chromatography.

Cell line studies

- Cancer cell lines HePG2, MCF7, HT29 – cytotoxicity assay
- Diabetes cell lines 3T3, INS1 - cytotoxicity assay

Molecular techniques

- Zymography
- Western Blot
- Isolation and Purification of Plasmid DNA and Genomic DNA

DNA / Protein sequencing, Primer Synthesis and Design

- DNA profiling (AGE)
- DNA Fingerprinting (RAPD, PCR-RFLP, AFLP)
- PCR, Reverse Transcriptase PCR (RT-PCR)
- Sequencing of 16S rRNA gene (Bacteria, Actinomycetes, Mitochondrial and Plastids)
- Total RNA Isolation and cDNA Synthesis
- Primer Designing and Synthesis
- DNA Barcoding (Animals, insects Plant, Fungi)
- Gene Cloning and Sequencing
- Gene Cloning, Protein Expression and Purification in E.coli
- Gene Expression Analysis by real time PCR
- Full length cDNA cloning

Compound Purification and Structure Elucidation

- Column chromatography preparative (PTLC) and Thin layer chromatography (TLC)
- UV visible spectrum studies
- Infra-Red spectrum (FT-IR, KBr pellet, UV-Vis-NIR).
- NMR spectrum (HNMR, CNMR, 2D NMR).
- Mass Spectrum (GCMS)
- Maldi - MS, LCMS,
- High Performance Liquid Chromatography (HPLC).
- High Performance Thin Layer Chromatography (HPTLC).
- X-ray Diffraction (Single crystal XRD / Powder XRD).
- Atomic absorption Spectroscopy (AAS)
- Inductively coupled plasma mass spectrometry (ICP-MS)
- Electron Microscopy (SEM, TEM, AFM, Phase Contrast) Analysis.

Registration Details

- DD (for registration fee 500/-) in favour of "Armats Biotek Pvt Ltd", payable at Chennai to be sent along with the duly filled registration form through post / courier
- Registration can also be done in-person



ARMATS BIOTEKTM
TRAINING AND RESEARCH INSTITUTE (ABTRI)





ARMATS BIOTEK™
TRAINING AND RESEARCH INSTITUTE (ABTRI)

Armats Biotech provides the best-in-class industry – certified projects & training program for Students, Research Scholars and Scientists!!!

Recognised centre for Ph. D., in Life Sciences!!!

Collaborations

- MOU made with reputed Universities like AMET, AVIT, Bharath and Engineering Colleges like SSN, St. Joseph's, KSR, Sree Sastha, Arunai and Karpaga Vinayaga

Achievements 2016

- Successfully purified a single crystal with "antidiabetic potential from herbal plant"
- Armats R & D unit has been sanctioned funding of INR 9L from TANSTIA.
- 7 Patents, 63 International publications
- 5 Bio organic Agro products

Speciality of the lab

- Special R&D facility for natural products and crystal development
- Bio analytical services for part time and full time Research scholars with flexible timings

We offer technical support and analytical guidance for various academic fields such as, Biology, Biotechnology, Medical, Dental Science, Chemistry, Physics, Botany, Zoology, Food technology, Bioinformatics, Genomics, etc.,

Bio-activity testing for Dental, para-medical and Pharmacy students



Intensive hands-on

Summer Industrial Training program

2016

- Natural Product Chemistry (5-10 days)
- Isolation and Characterization of Bioactive Metabolites (15-30 days)
- Industrial Microbial Fermentation Technology (5 days)
- Herbal Nanotechnology (15 days)
- Downstream Processing of Industrial Enzymes (10 – 15days)
- Microbial Nanotechnology (15-30 days)
- Production and Characterization of Microbial Secondary Metabolites (10 days)
- Cloning and Gene expression (Min 10 students – 15 days)
- Molecular Characterization of Bacterial Isolates (Min 10 students – 15 days)
- Molecular modeling and Drug designing (15 days)
- Biofertilizer formulation technology (15 days)
- *Azolla* and *Spirulina* production and its value added product training
- Food microbial quality control training (10-15 days)
- Bioreactor design technology for industrial model (15-30 days)
- CO₂ sequestration technology (15 days)
- Organic food products formulation training

Final year Projects & Internships

- Natural Product Chemistry
- Ethnopharmacology formulation
- Marine Microbial bioactives
- Industrial enzymes scale-up
- Environmental bio remediation
- Molecular Genetic Engineering
- Protein purification techniques
- Marine Nano Biotechnology
- Plant growth promoters production technology
- By-product utilization technology