



**AVIT**  
AARUPADAI VEEDU INSTITUTE OF TECHNOLOGY



**VINAYAKA MISSION'S  
RESEARCH FOUNDATION**  
(Deemed to be University under section 3 of the UGC Act 1956)



APPROVED BY AICTE



ACCREDITED BY NAAC



RECOGNIZED BY DSIR

# DEPARTMENT OF BIOTECHNOLOGY

## CONSULTANCY DIVISION



The Department of Biotechnology was conceptualized and started in AVIT by the year 2004 with an ambition to apply engineering knowledge and to create novel technology. The Department offers Under Graduate, Post Graduate (FT / PT) and Ph.D (FT /PT) Program. The Department has six major laboratories mainly Plant tissue culture, Microbiology, Immunology, Biochemistry, Cell and Molecular Biology and Bioorganic chemistry which imparts training for the students to make them competent and gain thorough knowledge. The Department has extensive research facilities and infrastructure to support ongoing teaching and research initiatives in the area of, clinical biochemistry, Environmental science, Medicinal plants, Nanotechnology, Plant tissue culture etc. The Department organizes guest lectures, seminars, conferences, workshops, hands on training, industrial visits, internships, industrial credit courses to create confidence and explore the recent trends in the young minds. The Department received fund from DBT. The Department has strong MoUs with Softgel Health Care Pvt. Ltd., Golden Jubilee Biotech Park for Women, Aaranya Biosciences Pvt. Ltd., SatsungPvt. Ltd., Micro therapeutic Pvt. Ltd., Baba Scientific and Genomic Research Pvt., Ltd., etc for various Industry academic collaboration.

## LABORATORY FACILITIES

- ✓ Plant Tissue Culture & Bioprocess Engineering Research Lab
- ✓ Biochemistry & Bioinstrumentation Lab
- ✓ Bio-organic chemistry & Chemical Engineering Lab
- ✓ Microbiology & Downstream Processing Lab
- ✓ Molecular Biology & Genetic Engineering Lab
- ✓ Immunology & Bioprocess Lab

### PLANT TISSUE CULTURE RESEARCH

#### DETAIL OF CONSULTANCY PROVIDED

##### Plant Tissue culture Development

- ✓ Environment conditions in the growth room which influence cell multiplication, are light, day length and temperature.
- ✓ The range of light intensities appropriate for culture room varies from 1000 to 5000 lux.
- ✓ Requirement of day length would be in the range of 16-18 hours.
- ✓ Temperature requirement varies from 20 – 30°C depending on species of plants.



Expert- Dr.R.Balachandar- AP/Biotech, AVIT

### BIOCHEMISTRY AND BIO-INSTRUMENTATION



Expert- Dr.B.Prabasheela- Asso., Prof /Biotech, AVIT

#### DETAIL OF CONSULTANCY PROVIDED

##### Analyse Parameters in Blood and urine sample for hospitals/clinics

- ✓ Sugar level
- ✓ Cholesterol level
- ✓ Protein
- ✓ urea
- ✓ creatinine,
- ✓ Enzymes etc.

## MOLECULAR BIOLOGY AND GENETIC ENGINEERING

### DETAIL OF CONSULTANCY PROVIDED

#### Provide the image analysis Report using Gel Documentation

- ✓ Proteins, antibodies and nucleic acid using Gel imaging systems, Scanners Transilluminators,



Expert- Dr.A.Nirmala- Asso., Prof /  
Biotech, AVIT



Expert- Dr.R.Balachandar- AP/Biotech, AVIT

### DETAIL OF CONSULTANCY PROVIDED

#### Provide the analysis Report using Thermal cycler

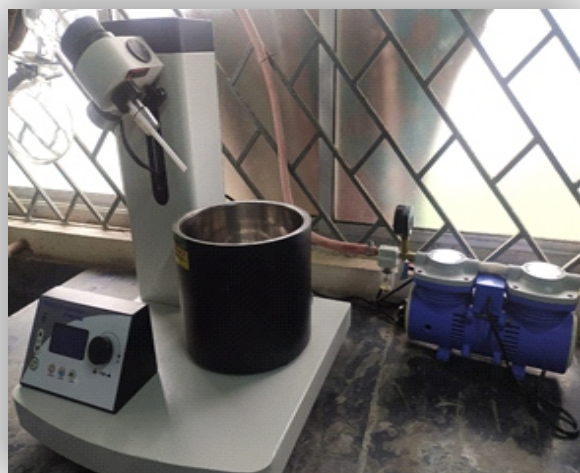
- ✓ Amplify DNA or RNA samples by the polymerase chain reaction
- ✓ Detect viral infections.

## BIOORGANIC CHEMISTRY AND CHEMICAL ENGINEERING LAB

### DETAIL OF CONSULTANCY PROVIDED

#### Make extraction using Soxhlet extraction mantle of biologically active compounds from

- ✓ Medicinal plants
- ✓ Micro organism
- ✓ Compounds from Fruit peels
- ✓ Beverages



Expert- Dr.B.Prabasheela- Asso., Prof /  
Biotech, AVIT

## MICROBIOLOGY AND DOWNSTREAM PROCESSING LAB

### DETAIL OF CONSULTANCY PROVIDED

#### Support to produce

- ✓ chemical compounds
- ✓ enzymes and drugs
- ✓ Bio mass production of Recombinant strain.
- ✓ Monoclonal antibody production



Expert- Ms.Sasikala- AP/Biotech, AVIT

## IMMUNOLOGY AND BIOPROCESS ENGINEERING LAB:

### DETAIL OF CONSULTANCY PROVIDED

#### Support to Detect

- ✓ Clinical pathogen infections
- ✓ Antibody-Antigen interaction.
- ✓ quantifying soluble substances such as peptides, proteins and hormones.



Expert- Dr.R.Balachandar- AP  
/Biotech, AVIT

### DETAIL OF CONSULTANCY PROVIDED

#### Support to Cell wall disintegration using Sonicator from

- ✓ Virus or bacterial cells
- ✓ Proteins,
- ✓ Antigens
- ✓ DNA/RNA



Expert- Dr.R.Balachandar- AP/  
Biotech, AVIT

#### *For consultancy detail*

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