

**Pro**

# Molecular Biology

**ONLINE PROGRAM**





# Objectives of Training & Projects are:

- Students are provided training and individual exposure to each Instrument and Applications which helps them to gain Technical knowledge, thus improve their job prospects.
- The curriculum offered covers the entire spectrum of Biotechnology and Microbiology.
- It aims at understanding how research tools and experimentation can be exploited to understand questions of fundamental significance in the field of Life Science.

**Eligibility:** B.Sc/M.Sc/BTech/MTech – BioTechnology / MicroBiology /  
Biochemistry, BE Biotech, Pharma graduates, Research Scholars,  
Medical Students, Dental Students.



# SYLLABUS

8 Sessions

## Introduction

Fundamentals to molecular biology Scope, objective  
Application of molecular biology  
Concept and mechanism of heredity  
Genetic Material: DNA & RNA, structure & types

## DNA Replication

Central Dogma of Molecular Biology  
Prokaryotic DNA Replication  
Eukaryotic DNA Replication





## Gene expression

Prokaryotic  
Eukaryotic Transcription  
Translation  
Genetic Codon

## Translation

Genetic Code  
Wobble Hypothesis  
Prokaryotic Translation  
Eukaryotic Translation  
Post Translational Modifications  
Protein Synthesis Inhibitors

## Molecular Genetics

FISH & GISH  
DNA sequencing  
DNA Polymorphism





## Cancer Biology

Cell Organization and Cancer Protein Localization  
Antisense and Ribozyme Technology  
Oncogene and Tumour suppressor gene

## DNA Repair Mechanism

DNA Repair

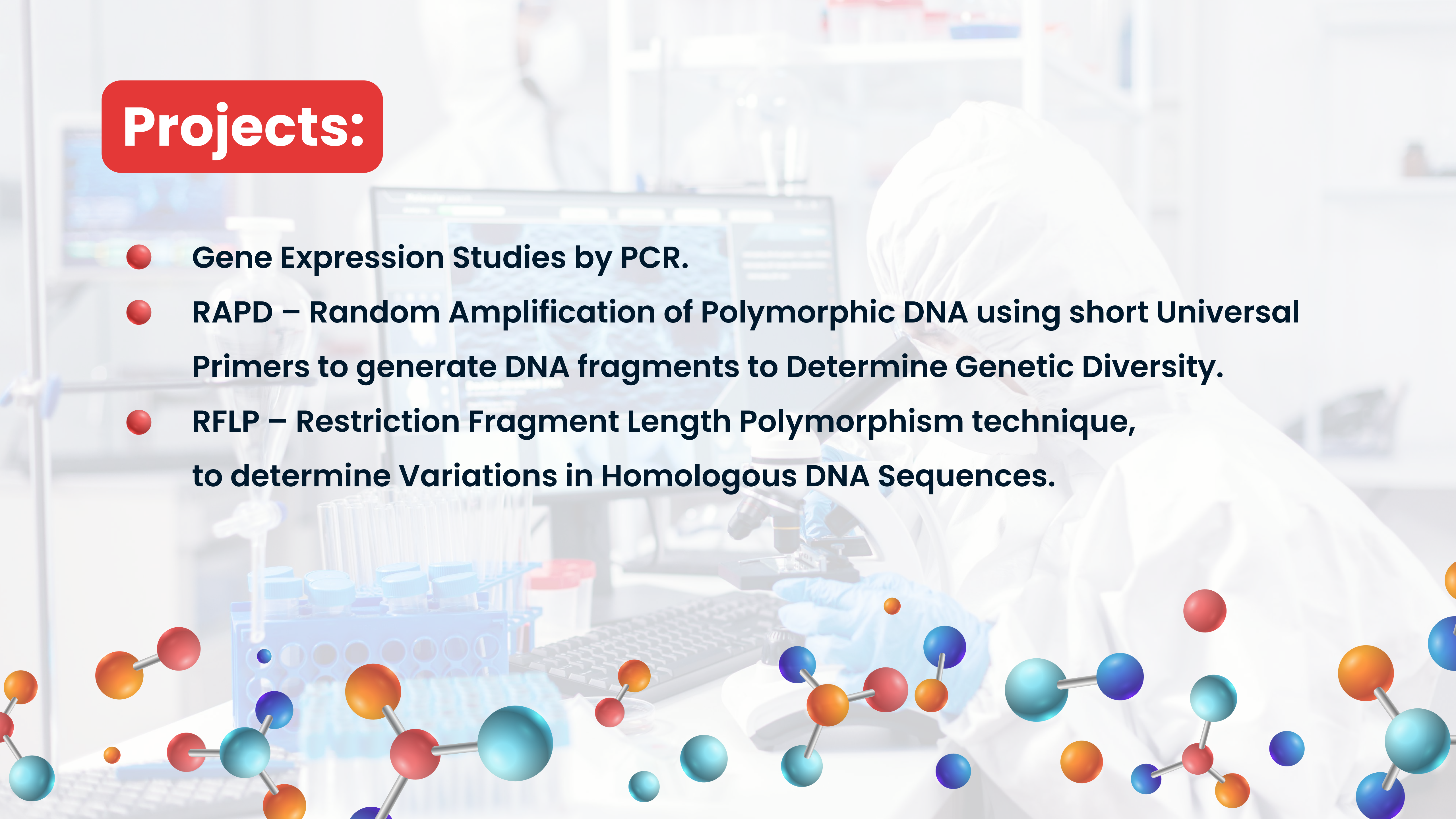
## Tools and Techniques

CRISPR/Cas9 Technology  
Electrophoresis  
Autoradiography  
Radioisotope Technique



# Projects:

- **Gene Expression Studies by PCR.**
- **RAPD – Random Amplification of Polymorphic DNA using short Universal Primers to generate DNA fragments to Determine Genetic Diversity.**
- **RFLP – Restriction Fragment Length Polymorphism technique, to determine Variations in Homologous DNA Sequences.**





# OUR AUTHORIZED TRAINING & CERTIFICATION PARTNERS



**AviGen BioTech Pvt Ltd.**  
Experience Research; Transform Life





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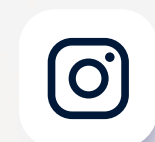


6363433634 | 6363091233



[support@teachnook.com](mailto:support@teachnook.com)

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