

VETA Genomics Compassionate Care For Your Companion Reg. No: U85100KL2022PTC076344

Kerala's Largest R&D Laboratory for Students

(Molecular Genetics, Biotechnology, Microbiology, Biochemistry)



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TECHNIQUES

DNA Isolation from Various Sources

Blood or Plasma (Circulating Cell Free DNA, Tumor DNA, Viral DNA), Bacteria, Fungus, Virus, Plasmids, Plants, Ants, Snail, Insects, Tissues, Protozoans, Feathers

- Silica Column based DNA Isolation
- Magnetic Bead (Magnetic Nanoparticle)based DNA Isolation
- Manual Methods (Phenol Chloroform)

RNA Isolation from Various Sources

Messenger RNA (mRNA, Ribosomal RNA, Total RNA- Blood, Bacteria, Virus, Plants, Tissues

- Silica Column based RNA Isolation
- Magnetic Bead based RNA Isolation

DNA/RNA Quantification

Using Qubit Flurometry

cDNA Synthesis- First Strand Synthesis

Blood RNA, Bacterial RNA, Viral RNA, Plant RNA

PCR - Using Different Molecular Markers

- 16s rRNA
- * CO1 (Cytochrome Oxidase)
- TS
- RBCL & MATK

Genetical Studies using PCR - Customized PCR Panels (Case Studies)

- BRCA 1 & BRCA 2 Mutation in this gene causes Breast Cancer
- ADRB2 Gene codes Beta Adrenergic Receptor (Mutation on this gene causes Salbutamol Drug Efficiency, Used for Asthma Treatment
- HBB- Codes Beta Globulin Chain- Mutation on this Gene Causes Beta Thalassemia and Sickle cell Anaemia
- CFTR- Cystic Fibrosis Trans Regulatory Gene (Mutation on this gene causes Cystic Fibrosis)
- GALT- Genes provides instructions for making Galactose 1 phosphate Uridylyltransferase. Mutation on this gene causes Galactosemia
- EPOR- Erythropoietin Receptor- Mutation in the EPOR gene lead to the production of abnormal receptors.
- TNF α Tumor Necrosis Factor
- TSHR Thyroid Stimulating hormone receptor- Mutation on this gene causes Hypothyroidism
- MPZ Myelin Protein Zero- Mutations on this gene causes Charcot-Marie-Tooth disease Type1

HANDS ON TRAINING

VETA Genomics is a leading biotech company, specialized in Genomics. which comprises of Veterinary Diagnostics, Research and Development section. R&D Department mainly focuses on kit development for various molecular tests. We also provide training, workshops and project assistance to the life science aspirants. We have accredi tations like startup India, DPIT, ISO and currently NABL processing. We deliver molecular techniques, micro biological techniques, Bioinformatic tool, etc with mainobjective to provide hands on experience in the techniques with industrial standards.

Real Time PCR

- Case study on Anaplasmosis
- Case study on Leptospirosis
- Case study on Ehrlichiosis
- Case study on Babesiosis
- Case study on Mycoplasmosis
- Gene Expression study
- Case study on bgls gene

Touch Down PCR Multiplex PCR QPCR Allele Specific PCR Gradient PCR Colony PCR Molecular identification of Antimicrobial Resistance (AMR Genes) from Microbial Community Sanger Sequencing Chemistry NGS Library Preparation Chemistry Primer Designing and Standardization

 Various Biological Databases, Primer Designing, Virulence Identification, BLAST, FASTA, Sequence Alignment, Multiple Sequence Alignment, Sanger Sequencing Data Analysis, Phylogenetic Tree Construction, SNP Analysis, Mutation Identification

RFLP

Antimicrobial Assay (MIC)

Isolation and Identification of Microorganisms from various Sources. (Soil, water)

Endophytic Bacterial isolaton- From Various Plants

Culturing of Microorganisms in Various Cultural Medias (Sheep Blood Agar)

Isolation of microorganisms using their Selective Media

- Metagenomic DNA Isolation from Soil & Water
- **Birds SEX Determination**

Good Laboratory Practices

Bioinformatics databases and Tools (Docking)

ABOUT US

VETA Genomics is a leading biotech company which comprises of Veterinary Diagnostics, Research and Development section. R&D Department mainly focuses on kit development for various molecular tests & Assay Validations. We also provide training, workshops, add on courses and project assistance to the life science aspirants. We have accreditations like startup India, DPIT, ISO and currently under NABL processing. We deliver molecular techniques, microbiological techniques, Bioinformatic tool, etc with main objective to provide hands on experience in the techniques with industrial standards.



Veta Genomics's core mission is to render the opportunity to gain occasional pedagogy for students to bridge essential skills and surplus knowledge to attain their hands on experience and expertise in industry – quality, on various Life Science Domains.

We provide Certification on successful completion of the programme.

COURSE IMPLEMENTATION:

Total : 30 Hours Online Course of instruction : 20 Hours Skill Enhancement Practicals : 10 Hours

* Practicals to be done either on our Lab site or Else in the concerned Institutional

workplace on an extra cost on the Operable Merchandise

BENEFITS:

Job Oriented Skill devolopment Hands on Expertise in concerned Subject In depth Knowledge in Modern Technologies ISO, EIAC-ROHS & Startup India Recognised Certificate



COURSES OFFERED:

- 1) Certificate Course in Cancer Genomics and Precision Oncology
- 2) Certificate Course in Advanced Molecular Biology Techniques on Prenatal Genetics and Diagnosis
- Certificate Course in Molecular markers used in Sexual and Reproductive Health
- 4) Certificate Course in Chronic Myeloid Leukemia- A Myeloproliferative Neoplasm-Diagnosis and Treatment
- 5) Certificate Course in Development of Molecular Markers for Infectious Disease Diagnosis
- 6) Certificate Course in Clinical Microbiology and Metagenomics
- 7) Certificate Course in Primer Designing and PCR Optimization
- 8) Certificate Course in Molecular Techniques used in Species Identification
- 9) Certificate Course in Regenerative Medicine and Disease Diagnosis
- 10) Certificate Course in Role of CYP Genes in Drug Metabolism
- 11) Certificate Course in Molecular Application on Forensic Science
- 12) Certificate Course in Molecular Applications in Food Safety and Quality Analysis
- 13) Certificate Course on Core Techniques used in Molecular Genetics
- 14) Certificate Course in Molecular Markers used in Plant Genomics
- 15) Certificate Course in Tools used in Bioinformatics and Sequence Analysis





| Research projects | Sequencing | Microbialassays | Phd works | Colleges | Samples processed |
|-------------------|------------|-----------------|-----------|----------|-------------------|
| 100+ | 250+ | 1000+ | 10+ | 100+ | 10k+ |



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