



Industry Certified Internship

Centre of Excellence in Computational Genomics

Certification by Intergene Life Sciences

Internship Modules for Engineering students

| Sl No | Multimiomics study | Diagnosis and Drug discovery | AI/ML in lifesciences |
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| 1 | Milk metagenome analysis for designing potential postbiotics for neonates | Anti-sense oligo (ASO) nucleotides in drug discovery | Personalized medicine using AI/ML |
| 2 | Metagenomic and metabolic profiling to identify novel biomarkers for detecting Poly cystic ovarian syndrome | Formulation design for ASO | Prediction using AI/ML model for selection of population in Mulberry for crop improvement |
| 3 | Developing a dog breed detection kit using novel biomarkers | Design of anti-cancer peptides targeting Frizzled proteins | Develop a reinforcement learning-based algorithm to identify lead molecules by emulating ligand-protein interactions |
| 4 | Pan genome and transcriptomic analysis of Aedes aegypti | Building novel pharmacophore to screen P-glycoprotein substrate | Machine learning models to prioritize optimal parameters of predicted ADME and Toxicity data |
| 5 | Antimicrobial resistance surveillance | Design of DNA/RNA based aptamers for detection of Mycobacterium Tuberculosis | To develop a regression based Quantitative structure property relationships model for Caco-2 cell permeability. |
| 6 | Soil/Plant metagenome analysis | Enzyme-Linked Aptamer Assay (ELAA) based peptide aptamer design for detection of Mycobacterium Tuberculosis | ML model for antiviral peptide predictions using Generative Adversarial Networks |
| 7 | Chemogenomic analysis of Bombyx mori | Docking studies for AP-2 α 2 transcription factor against given set of ligands as an alternative approach for targeting DLEC1 breast cancer gene | Developing an AI/ML model for prediction of LC50 values of given compounds |
| 8 | Metagenome /Metaproteome analysis and mapping | Build and validate novel pharmacophore model for anti-inflammatory and anti-cancer compounds | A computational pipeline to predict Drug Induced Liver Injury |
| 9 | Developing a novel pipeline for detection of markers using alternative splicing and exome analysis | Developing a pharmacophore & QSAR model for screening human proteome | Developing a linear discriminant analysis model for screening pharmaceutical compounds with hERG |

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| | | | inhibitory activity |
| 10 | Genotyping by sequencing for Soybean | | Developing database for Aedes aegypti proteome |
| 11 | Socks metagenome analysis | | |
| 12 | Transcriptome analysis of ovarian cancer for identification of novel biomarkers | | |
| 14 | Identification of phytochemotherapeutic targets for cancer (any type) | | |

For Further Information Contact:

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