

Molecular Genetics Internship Topics

This PDF is generated dynamically from the current NTHRYS ASCEND database for **Molecular Genetics**.

Source page: <https://www.nthrys.com/molecular-genetics-internship-topics.html>

50
Active Categories

20
Focused Areas

Internships
Internships

Molecular Genetics Internship Categories

AI Gene Regulation & Transcription Research https://internships.nthrys.com/molecular-genetics/ai-gene-regulation-transcription-research	Machine Learning Genetic Variant Effect Research https://internships.nthrys.com/molecular-genetics/machine-learning-genetic-variant-effect
AI Epigenetic Modification Research https://internships.nthrys.com/molecular-genetics/ai-epigenetic-modification-research	AI CRISPR Genetics Application Research https://internships.nthrys.com/molecular-genetics/ai-crispr-genetics-application-research
AI Imprinting & Non-Mendelian Research https://internships.nthrys.com/molecular-genetics/ai-imprinting-non-mendelian-research	AI Transposon Biology Research https://internships.nthrys.com/molecular-genetics/ai-transposon-biology-research
AI Alternative Splicing Research https://internships.nthrys.com/molecular-genetics/ai-alternative-splicing-res	AI RNA Interference Research https://internships.nthrys.com/molecular-genetics/ai-rna-interference-research
AI Non-Coding Genome Function Research https://internships.nthrys.com/molecular-genetics/ai-non-coding-genome-function-research	AI Chromosome Organization Research https://internships.nthrys.com/molecular-genetics/ai-chromosome-organization-research
DNA Sequencing Technology Development https://internships.nthrys.com/molecular-genetics/dna-sequencing-technology-development	Genome Assembly Computational Methods https://internships.nthrys.com/molecular-genetics/genome-assembly-computational-methods
SNP Detection and Validation Studies https://internships.nthrys.com/molecular-genetics/snp-detection-and-validation-studies	Copy Number Variation Analysis Research https://internships.nthrys.com/molecular-genetics/copy-number-variation-analysis-research
Mutation Screening in Genetic Diseases https://internships.nthrys.com/molecular-genetics/mutation-screening-in-genetic-diseases	Linkage Analysis and Gene Mapping https://internships.nthrys.com/molecular-genetics/linkage-analysis-and-gene-mapping
Recombination Frequency and Crossing Over https://internships.nthrys.com/molecular-genetics/recombination-frequency-and-crossing-over	Quantitative Trait Loci Mapping https://internships.nthrys.com/molecular-genetics/quantitative-trait-loci-mapping
Promoter Activity and Regulation Studies https://internships.nthrys.com/molecular-genetics/promoter-activity-and-regulation-studies	Enhancer Element Functional Analysis https://internships.nthrys.com/molecular-genetics/enhancer-element-functional-analysis
DNA Methylation Pattern Investigation https://internships.nthrys.com/molecular-genetics/dna-methylation-pattern-investigation	Histone Modification Functional Studies https://internships.nthrys.com/molecular-genetics/histone-modification-functional-studies
Chromatin Immunoprecipitation Experiments https://internships.nthrys.com/molecular-genetics/chromatin-immunoprecipitation-experiments	mRNA Stability and Decay Mechanisms https://internships.nthrys.com/molecular-genetics/mrna-stability-and-decay-mechanisms
Protein Expression Level Quantification https://internships.nthrys.com/molecular-genetics/protein-expression-level-quantification	Gene Knockout Model Development https://internships.nthrys.com/molecular-genetics/gene-knockout-model-development
Conditional Gene Expression Systems https://internships.nthrys.com/molecular-genetics/conditional-gene-expression-systems	RNA Structure and Function Analysis https://internships.nthrys.com/molecular-genetics/rna-structure-and-function-analysis
MicroRNA Target Prediction Studies https://internships.nthrys.com/molecular-genetics/microrna-target-prediction-studies	Long Non-Coding RNA Characterization https://internships.nthrys.com/molecular-genetics/long-non-coding-rna-characterization
Homologous Recombination Repair Pathways https://internships.nthrys.com/molecular-genetics/homologous-recombination-repair-pathways	Point Mutation Induction and Analysis https://internships.nthrys.com/molecular-genetics/point-mutation-induction-and-analysis

Chromosomal Abnormality Characterization https://internships.nthrys.com/molecular-genetics/chromosomal-abnormality-characterization	Genetic Drift Simulation in Populations https://internships.nthrys.com/molecular-genetics/genetic-drift-simulation-in-populations
Horizontal Gene Transfer Mechanisms https://internships.nthrys.com/molecular-genetics/horizontal-gene-transfer-mechanisms	Genetic Marker Development Studies https://internships.nthrys.com/molecular-genetics/genetic-marker-development-studies
Polymerase Chain Reaction Optimization https://internships.nthrys.com/molecular-genetics/polymerase-chain-reaction-optimization	DNA Fingerprinting and Genotyping https://internships.nthrys.com/molecular-genetics/dna-fingerprinting-and-genotyping
Genetic Screening in Model Organisms https://internships.nthrys.com/molecular-genetics/genetic-screening-in-model-organisms	RNA-Seq Expression Profiling https://internships.nthrys.com/molecular-genetics/rna-seq-expression-profiling
Comparative Genomics and Evolution https://internships.nthrys.com/molecular-genetics/comparative-genomics-and-evolution	Synten and Gene Order Conservation https://internships.nthrys.com/molecular-genetics/synteny-and-gene-order-conservation
Codon Usage and Translation Optimization https://internships.nthrys.com/molecular-genetics/codon-usage-and-translation-optimization	Genetic Code Variation Studies https://internships.nthrys.com/molecular-genetics/genetic-code-variation-studies
Plasmid Engineering and Cloning https://internships.nthrys.com/molecular-genetics/plasmid-engineering-and-cloning	Bacterial Genomic Island Characterization https://internships.nthrys.com/molecular-genetics/bacterial-genomic-island-characterization
Viral Genome Integration Studies https://internships.nthrys.com/molecular-genetics/viral-genome-integration-studies	Mitochondrial DNA Mutation Analysis https://internships.nthrys.com/molecular-genetics/mitochondrial-dna-mutation-analysis
Chloroplast Genome Organization https://internships.nthrys.com/molecular-genetics/chloroplast-genome-organization	Population Allele Frequency Dynamics https://internships.nthrys.com/molecular-genetics/population-allele-frequency-dynamics

Molecular Genetics Internship Topics and Focused Areas

AI Gene Regulation & Transcription Research

- Deep Learning Models for Transcription Factor Binding Prediction
- CRISPR-Based Gene Regulation Mapping
- Single-Cell RNA-seq Analysis of Transcriptional Heterogeneity
- Epigenetic Modifications and Chromatin Accessibility Studies
- Natural Language Processing for Mining Regulatory Literature

DNA Sequencing Technology Development

- Next-Generation Sequencing (NGS) Data Analysis Pipeline Development
- Long-Read Sequencing Technology Optimization
- Targeted Gene Sequencing and Panel Design
- Single-Cell Sequencing Protocol Development
- Portable and Field-Based Sequencing Technology Assessment

Mutation Screening in Genetic Diseases

- SNP and Indel Detection in Candidate Genes
- Sanger Sequencing and Mutation Validation
- Copy Number Variation (CNV) Analysis in Disease Pathogenesis
- High-Throughput Mutation Screening Using NGS
- In Silico Pathogenicity Prediction and Variant Classification

DNA Fingerprinting and Genotyping

- STR (Short Tandem Repeat) Analysis and Population Genetics
- SNP Genotyping and Genome-Wide Association Studies (GWAS)
- DNA Barcoding and Species Identification
- Forensic DNA Profiling and Case Analysis
- Mitochondrial DNA Sequencing and Maternal Lineage Tracking

Generated on demand by NTHRYS. This PDF is not stored on the server; it is streamed directly to the browser from the current database content.