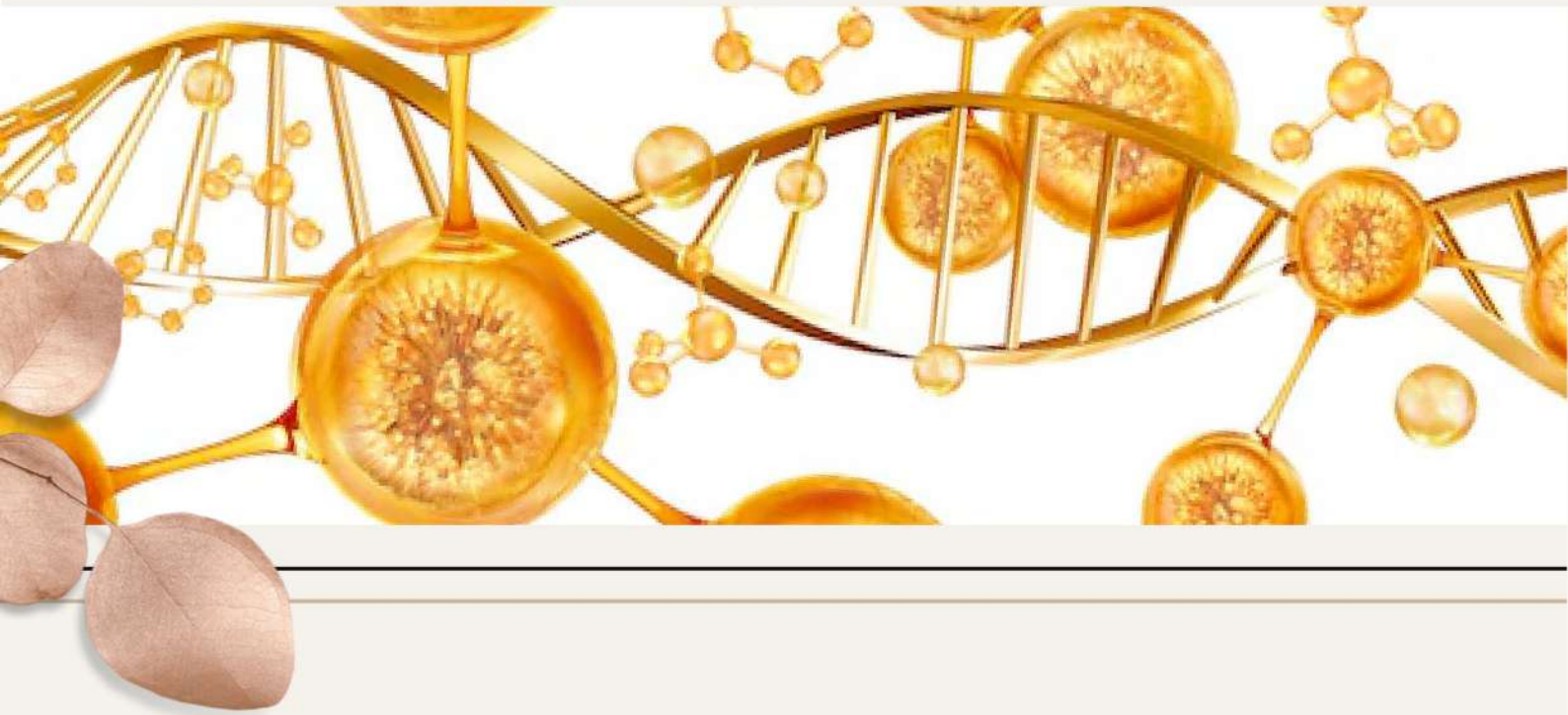




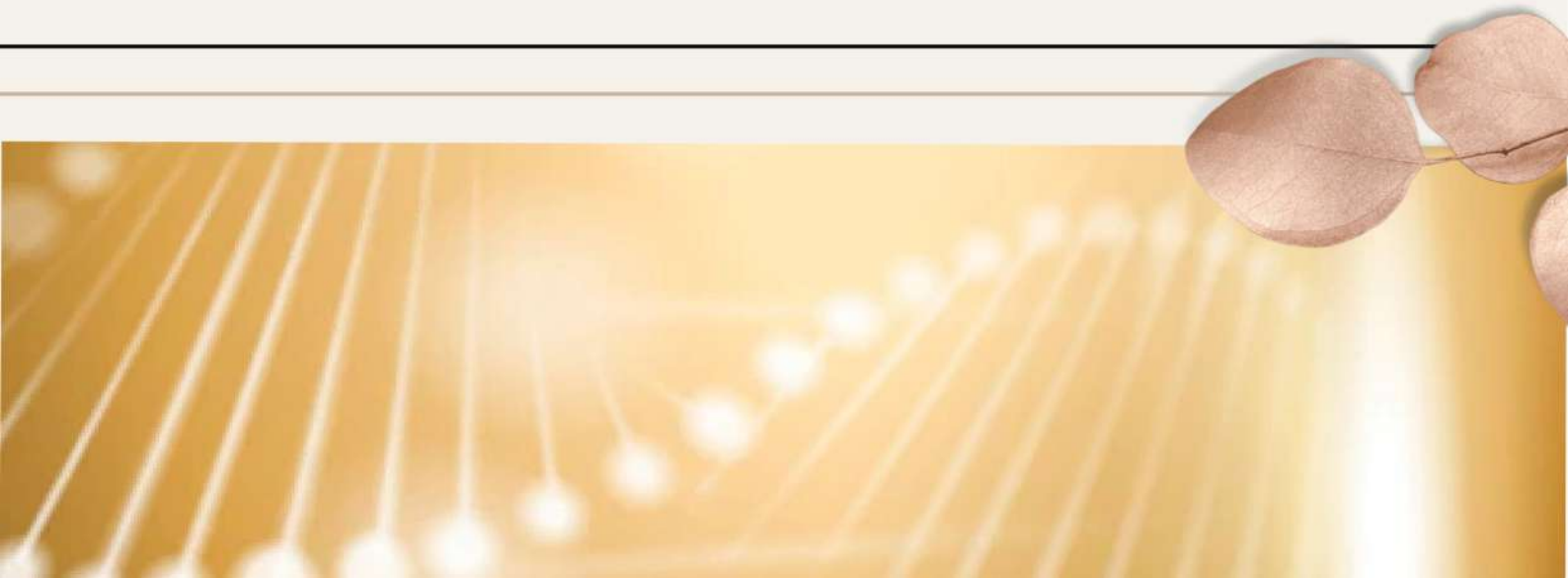
**Dr.Omics** Labs  
The Doctor of your DNA



# NEXT-GENERATION SEQUENCING (NGS) MASTERY

A **1-MONTH** INDUSTRIAL BIOINFORMATICS  
INTERNSHIP

**Genomic Insights: Variant Calling, Annotation & RNA-Seq Analysis**



# Your NGS Internship journey starts here:

At Dr.Omics Labs, we're excited to offer you an opportunity to embark on an incredible journey of discovery and innovation in the field of Next-Generation Sequencing (NGS).



## *About Us*

Dr.Omics Labs is a leader in the field of bioinformatics and genomics research. We are committed to pushing the boundaries of scientific knowledge and fostering the next generation of bioinformatics experts.

### **The Internship Experience**

- Our Industrial Bioinformatics Long-term Internship program is designed to provide you with a comprehensive understanding of NGS technologies, data analysis, and their real-world applications.

### **One Month Internship Program Highlights**

- Hands-on experience with Next-Generation Sequencing (NGS).
  - Expert-led workshops and training.
  - Access to cutting-edge bioinformatics tools.
  - Networking opportunities.
-



# Coursework Overview (Modules)

1. DNA Sequencing (Variant calling),  
Annotation
2. RNA Sequencing (Reference Based)

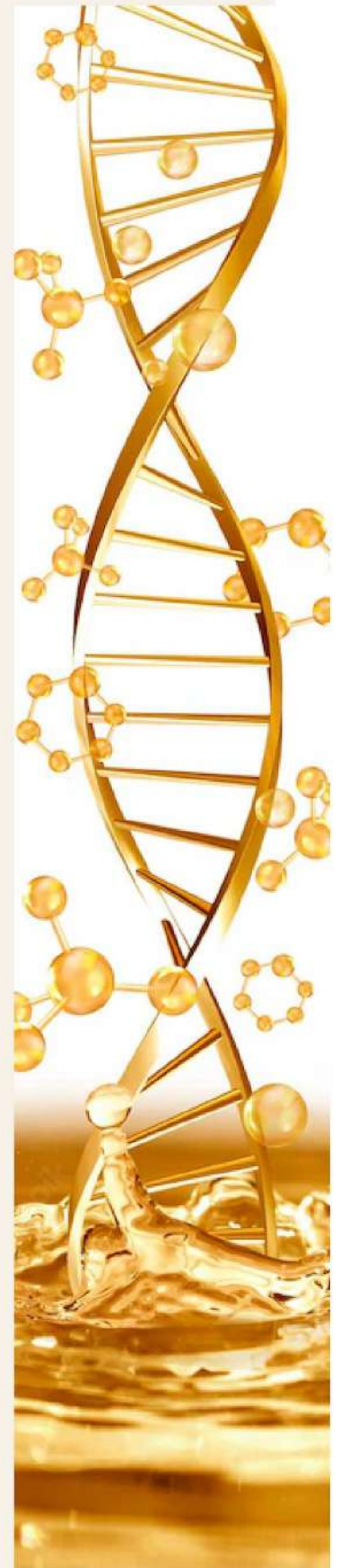


## Module 1: DNA Seq (Variant calling), Annotation

- Introduction and installation of tools
- Data retrieval & quality check of reads
- Mapping of reads using reference Genome
- Understanding Mapping Output
- Variant detection
- Visualization of variation
- Annotation and variant effect prediction
- Determining effect of coding non-synonymous mutation on protein function ability

## Module 2: RNA Sequencing (Reference Based)

- Introduction to RNA Seq
- Necessary Tools installation
- Learn how Data Retrieval is done
- Quality Check of reads using FASTQC, FastP
- Trimming and cleaning of data using Cutadapt
- Understanding mapping of reads on reference genome and file formats (SAM, BAM) with Hisat2
- Visualization techniques
- Gene Expression Quantification & Analyzation
- Pathway & Gene ontology enrichment analysis using StringTie, DESeq2
- Pathway Network analysis using KEGG





## Program Structure

- Duration: 1 Month

## From Theory to Practice: Bridging the Gap in Genomic Research

- **Comprehensive NGS Training:** Understand NGS fundamentals, data generation, and quality control.
  - **Bioinformatics Tools and Resources:** Master NGS analysis tools and explore essential genomic databases.
  - **Professional Development:** Enhance your resume and gain mentorship from experienced professionals
-

## Frequently Asked Questions

**Q: Are these courses suitable for those new to the field without prior experience?**

A: Yes, our courses are designed to cater to beginners with no prior experience in the field. We provide foundational content suitable for all skill levels.

**Q: Will I receive a certification upon completing the course?**

A: Absolutely, a digital certificate will be awarded upon course completion. You'll receive this certificate via email.

**Q: Do the courses include practical projects and research opportunities?**

A: Certainly, our courses incorporate practical projects and research opportunities to ensure hands-on learning and the practical application of acquired knowledge.

**Q: Can I access class recordings if I miss a class?**

A: Yes, class recordings are available. We'll send you the recording link via email if you miss a class, typically on the day following the live session.

**Q: Can I continue to access course materials and resources after finishing the course?**

A: Absolutely, you'll retain access to course materials and resources even after completing the course. These materials will be shared with you via email or WhatsApp.

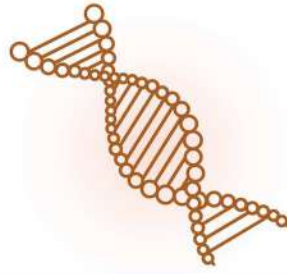
---





## Terms and Conditions

- **Maintaining Discipline during the Tenure.**
  - **It is mandatory to maintain 85% attendance for all students.**
  - **Students must maintain an average 'A2' grade throughout their training period.**
-



NEED MORE INSIGHT & SUPPORT?

# CONTACT US!

602/E, W NO 3, G/F, L/SIDE, SEQNO-M, H 3/727  
GADAIPUR, NEW DELHI , SOUTH-WEST DELHI-110030



+91-7289003396



[www.dromicsedu.com](http://www.dromicsedu.com)

*Thank you!*



**Dr.Omics Labs**  
The Doctor of your DNA

OUR CERTIFICATIONS & GRANTS

