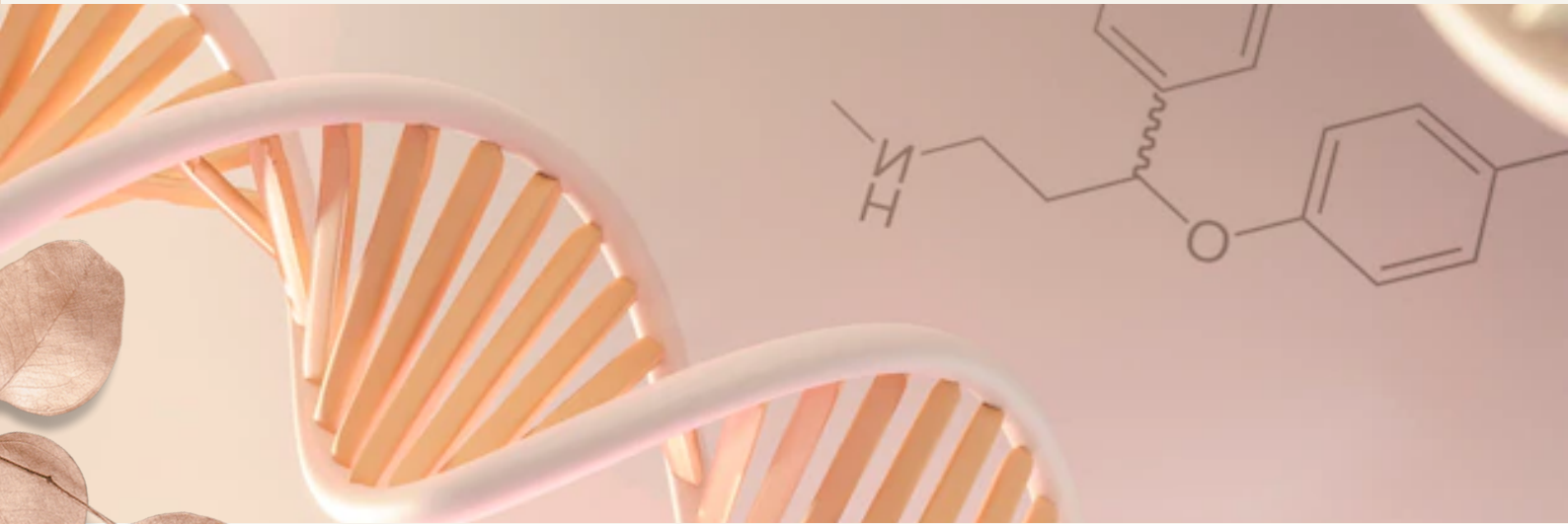




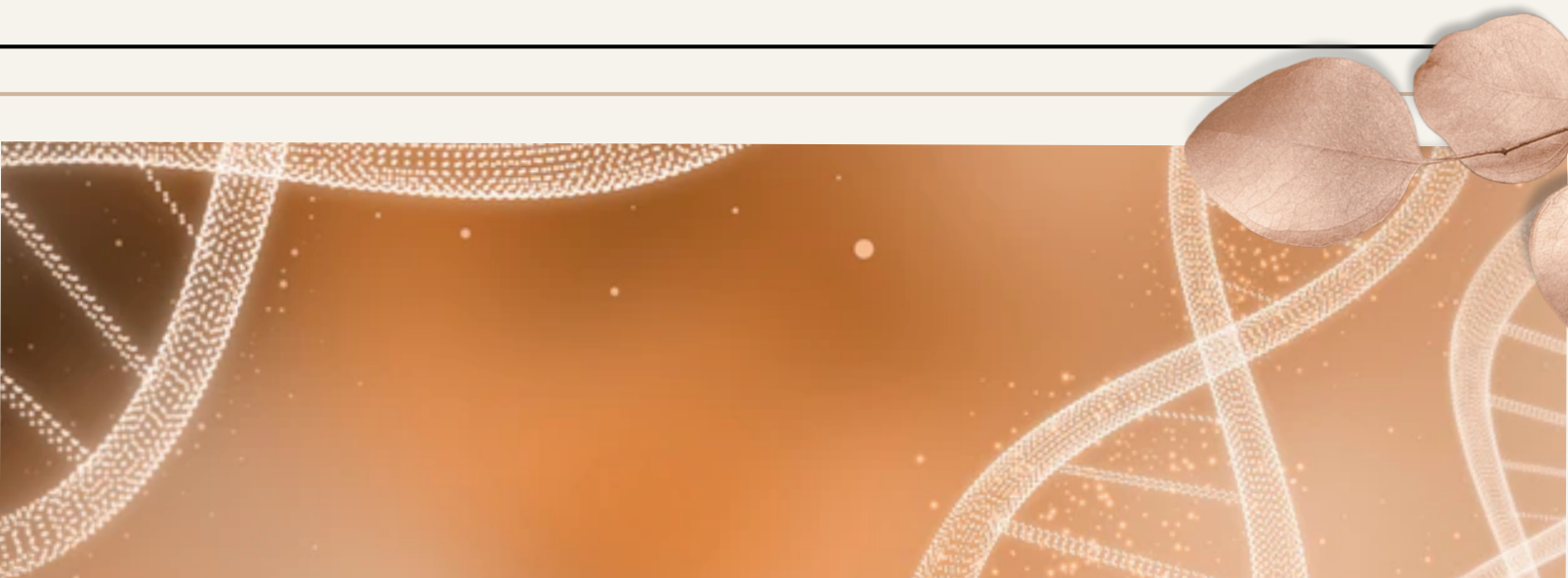
Dr.Omics Labs
The Doctor of your DNA



UNLOCKING THE POTENTIAL OF NEXT-GENERATION SEQUENCING

2-MONTHS

INDUSTRIAL BIOINFORMATICS
INTERNSHIP JOURNEY



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.

Two Months Internship Program Highlights

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

1. R Programming and introduction to Bioconductor
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2. HR Session
—
3. DNA SEQ (Variant Calling), Annotation
—
4. Project on NGS (1 month)
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Module 1: R Programming and introduction to Bioconductor

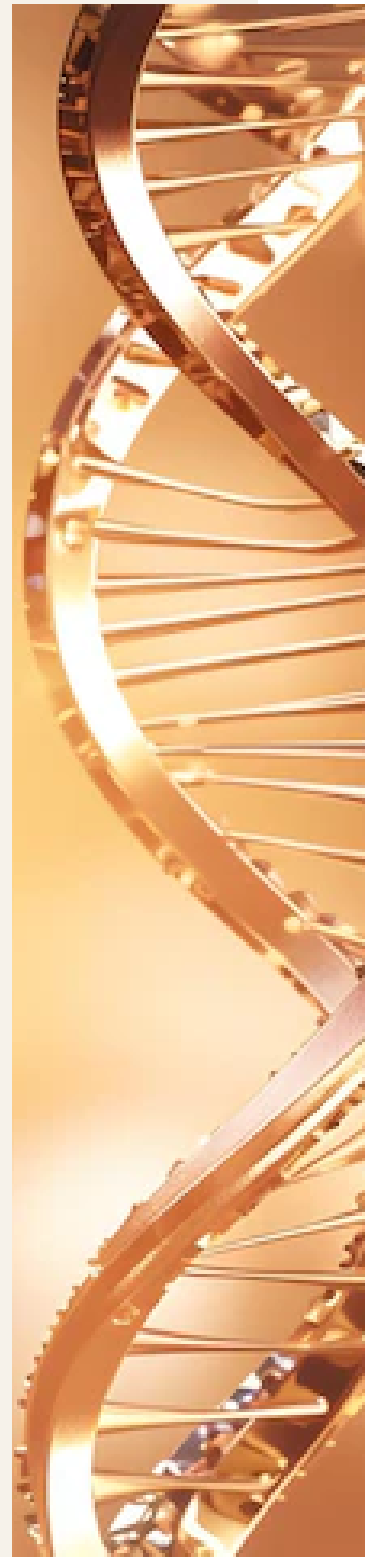
2.1) R Programming

- Introduction to the R language
- Importance of R in Bioinformatics
- Installation of R
- Installation of IDE (R studio)
- Print, cut, and paste functions
- Comments
- Variables
- Data types
- Functions of math
- Operators
- Installation of packages
- String formatting
- Learning Control Statements (if -else, while loop, break, etc.)
- R Data Structures (Lists, Vectors, Arrays, etc)
- File Handling & User-Defined Functions



2.2) Introduction to Bioconductor

- Bioconductor package installation
- Sequence analysis
- Basics of seqinr package
- Import and export FASTA sequences
- Reverse complement
- GC content
- Retrieving GenBank and fasta files from NCBI
- Statistical study for Analysis (z-test, t-test, etc)
- Plot generation for data visualization (box plot, PCA plot, Heatmap, Volcano Plot)



Module 2: 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





DURATION

2 months

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
 - **Real-world Project:** Engage in variant calling, and functional annotation project.
 - **HR Session:** Gain invaluable HR expertise through interactive sessions.
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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: 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.**
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NEED MORE INSIGHT & SUPPORT?

CONTACT US!

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Thank you!



Dr.Omics Labs
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OUR CERTIFICATIONS & GRANTS

