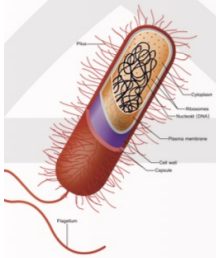
MAY 9-12, 2022

FIFTH ANNUAL

TODOS SANTOS GENOMICS DATA ANALYSIS WORKSHOP

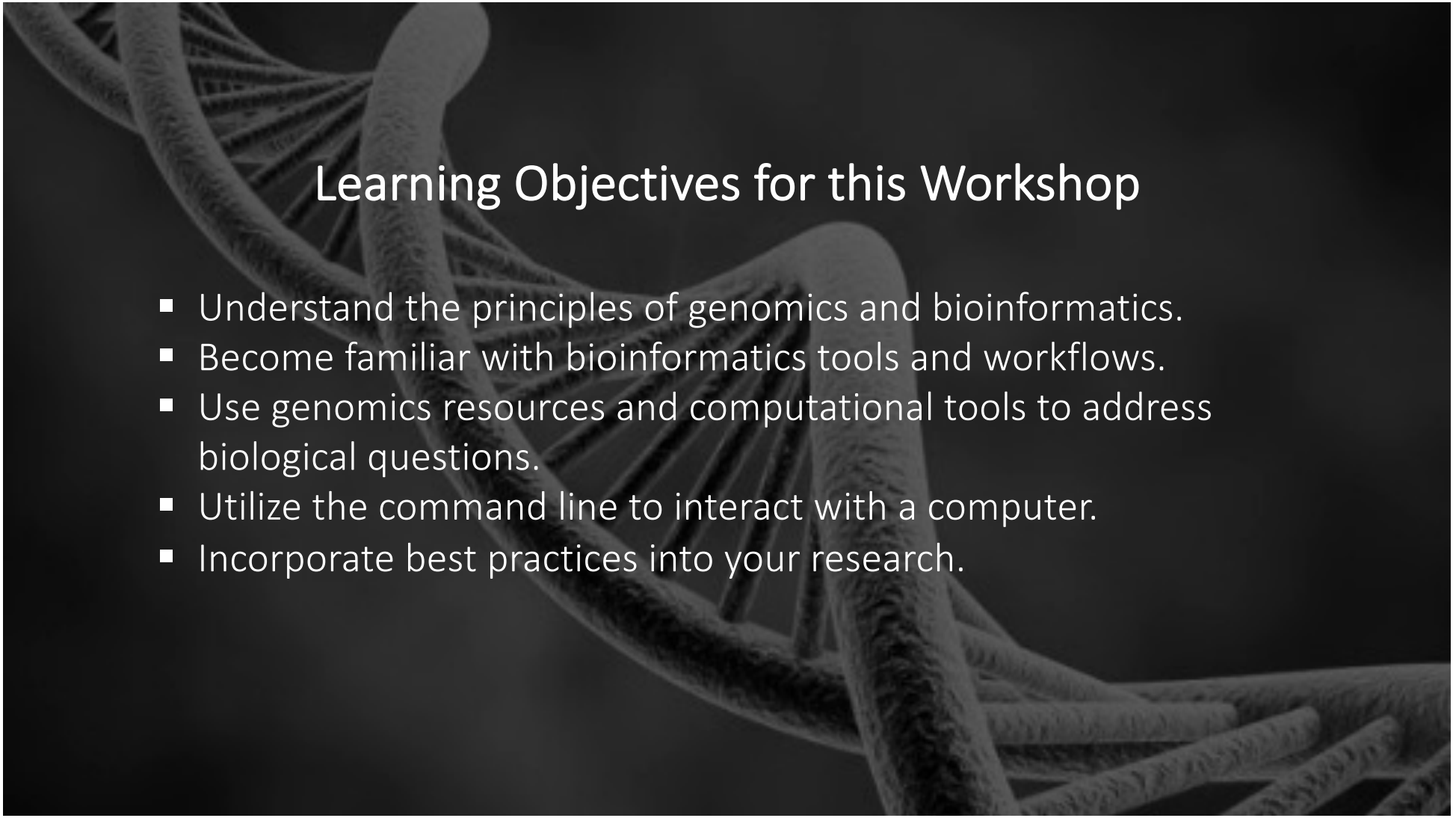
RNA-sequencing
and Gene Expression

Command Line
Computing



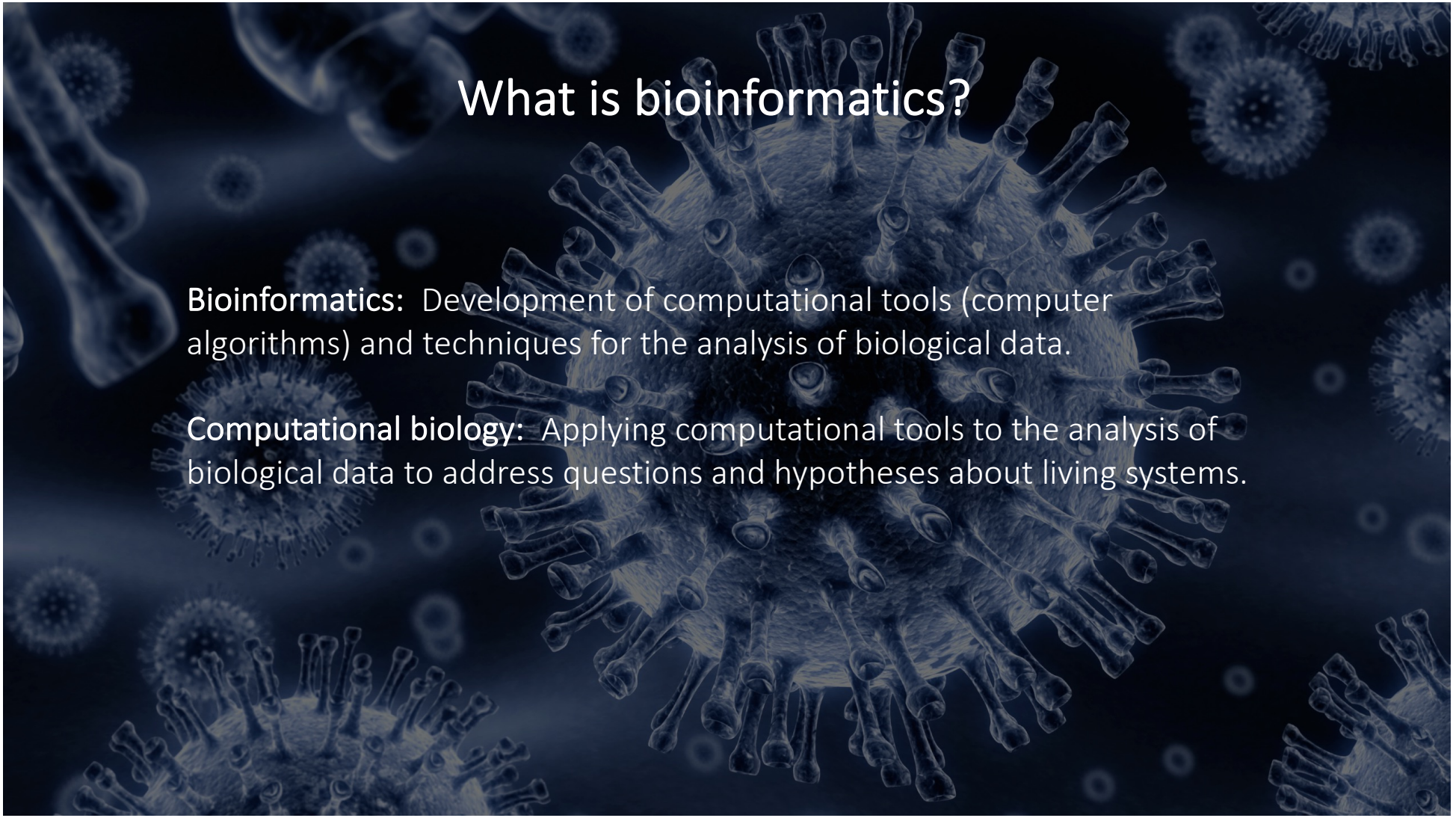
Genome Assembly and
Comparative Genomics

Workflow Management
and Reproducibility



Learning Objectives for this Workshop

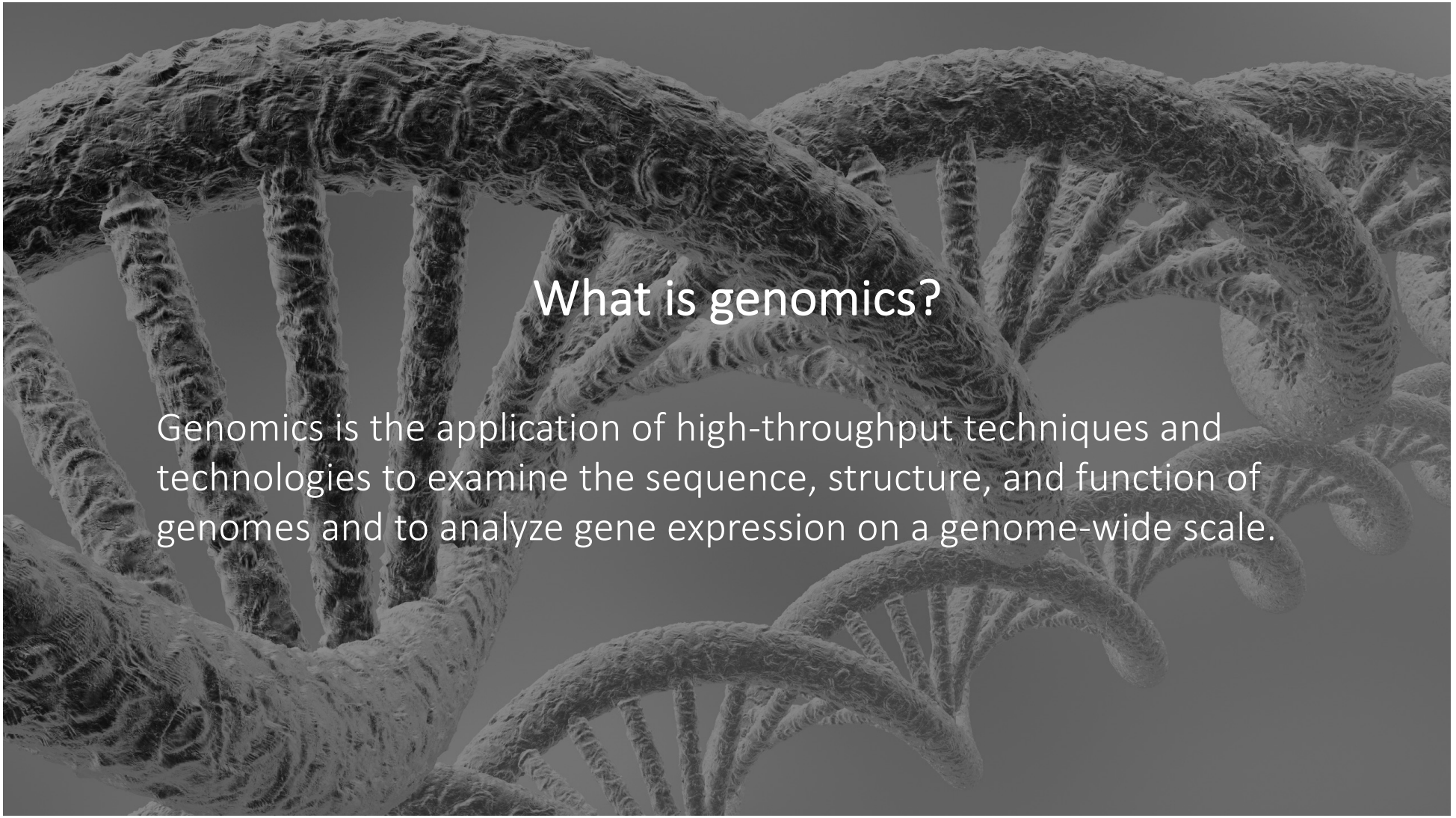
- Understand the principles of genomics and bioinformatics.
- Become familiar with bioinformatics tools and workflows.
- Use genomics resources and computational tools to address biological questions.
- Utilize the command line to interact with a computer.
- Incorporate best practices into your research.



What is bioinformatics?

Bioinformatics: Development of computational tools (computer algorithms) and techniques for the analysis of biological data.

Computational biology: Applying computational tools to the analysis of biological data to address questions and hypotheses about living systems.

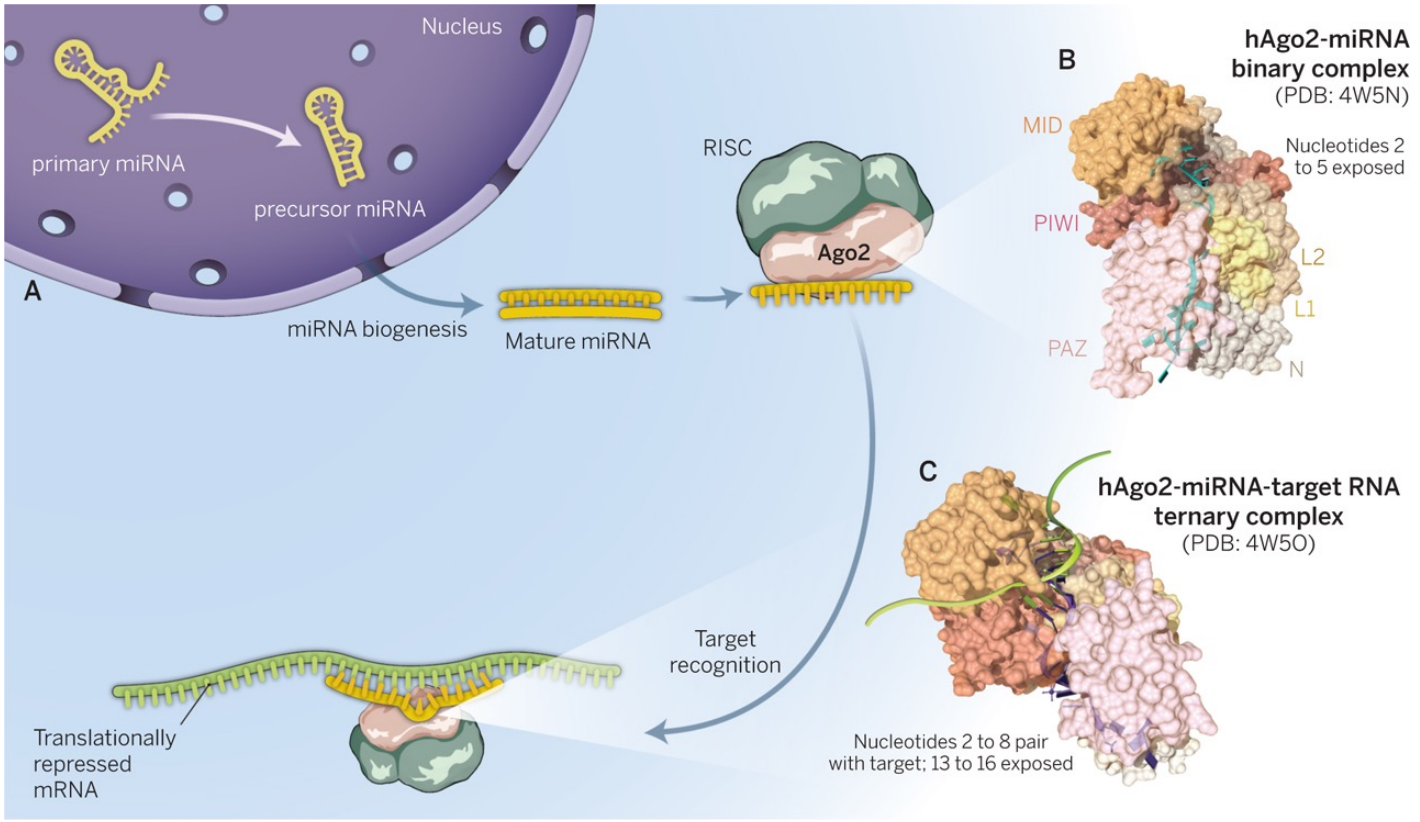


What is genomics?

Genomics is the application of high-throughput techniques and technologies to examine the sequence, structure, and function of genomes and to analyze gene expression on a genome-wide scale.

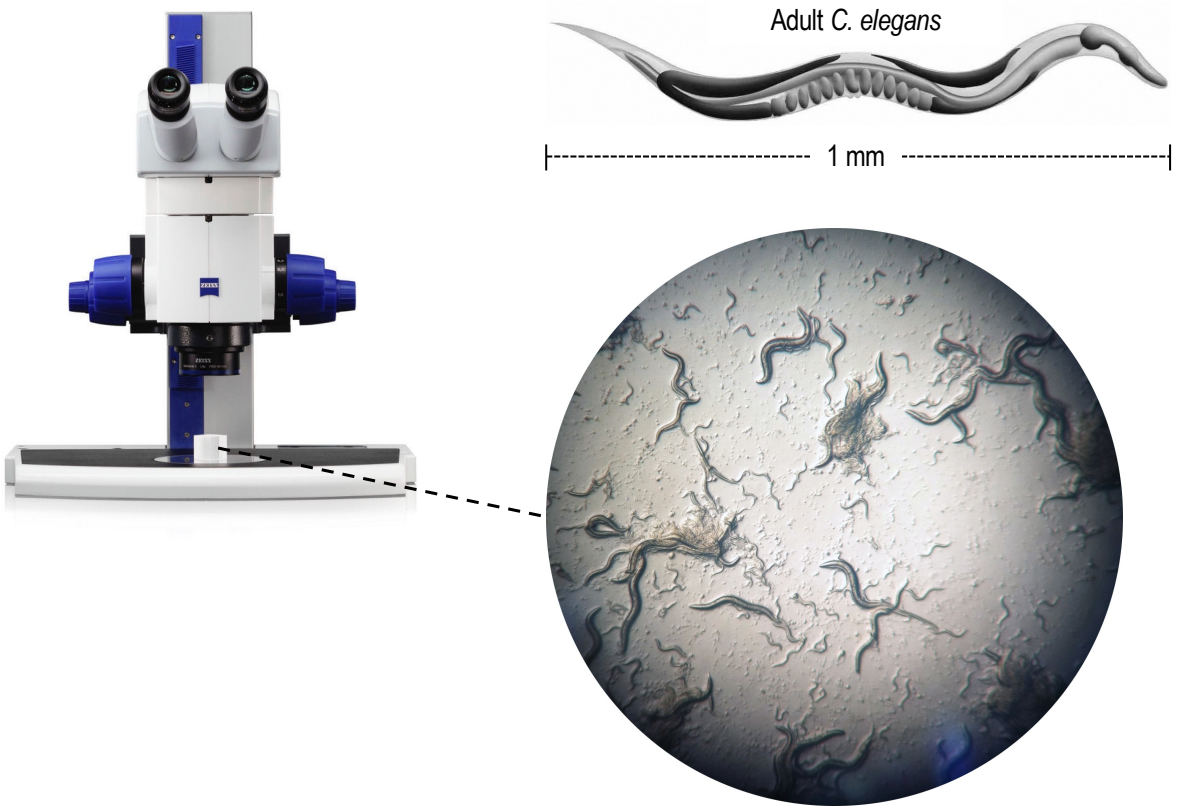
What does my lab study?

microRNA pathway

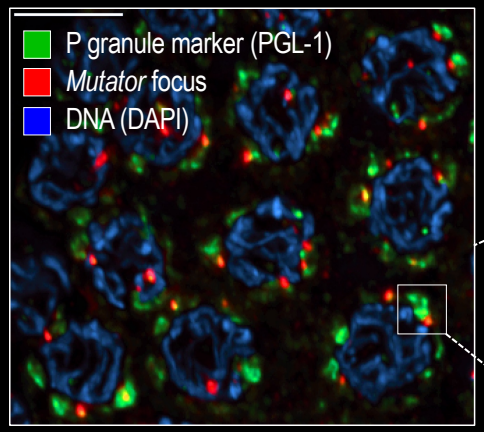


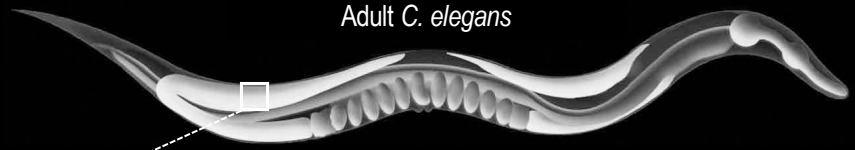
Dinshaw Patel, 2014

C. elegans as a pioneer for small RNA discovery



RNA surveillance in *C. elegans*





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