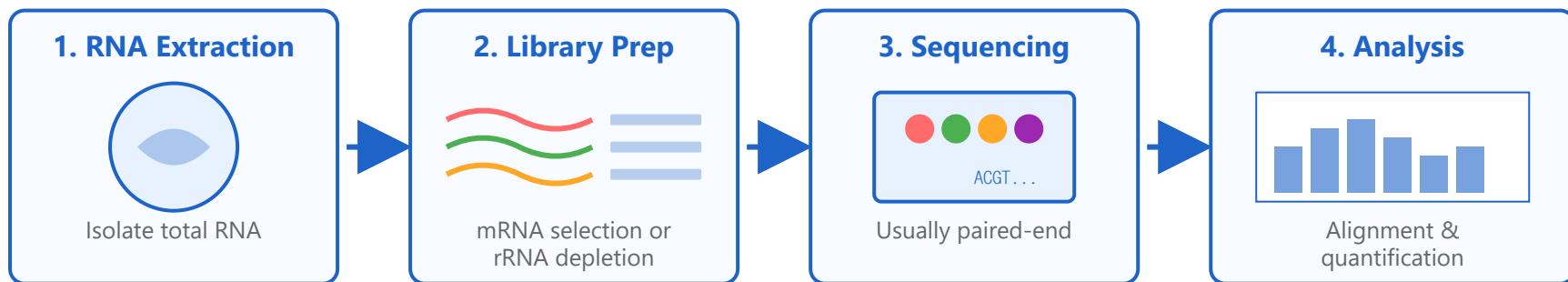


# RNA-seq Overview

## What is RNA-seq?

- Sequence all RNA molecules in a sample
- Quantify gene expression levels
- Discover novel transcripts and splice variants
- Study transcriptome dynamics

## RNA-seq Workflow



### Applications

- Differential expression
- Alternative splicing

### Key Tools

- STAR, HISAT2 (alignment)
- featureCounts (quantification)

- Novel transcript discovery
- Allele-specific expression

- DESeq2, edgeR (DE analysis)
- Salmon, kallisto (pseudo-alignment)