

TRANSCRIPTOMICS

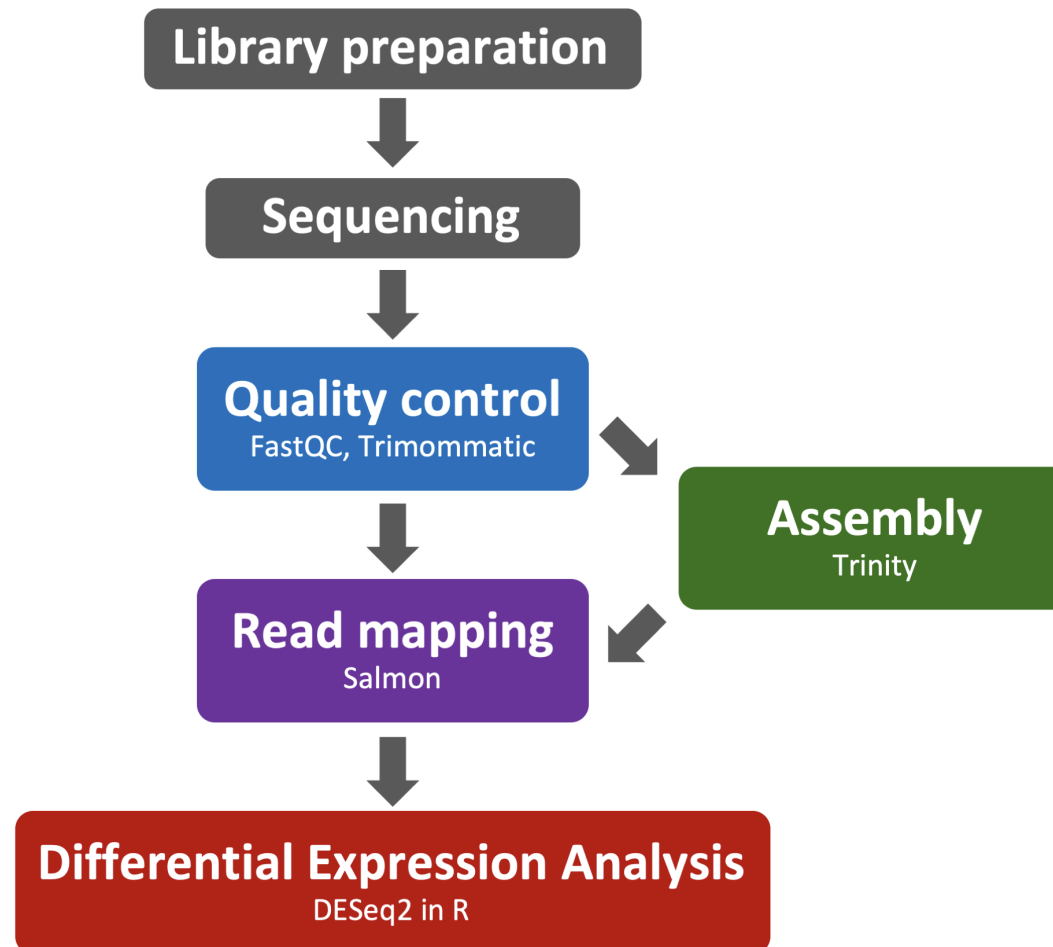
Assembly with Trinity Part I

Day 03

<https://ttdorres.github.io/transcriptomics/>

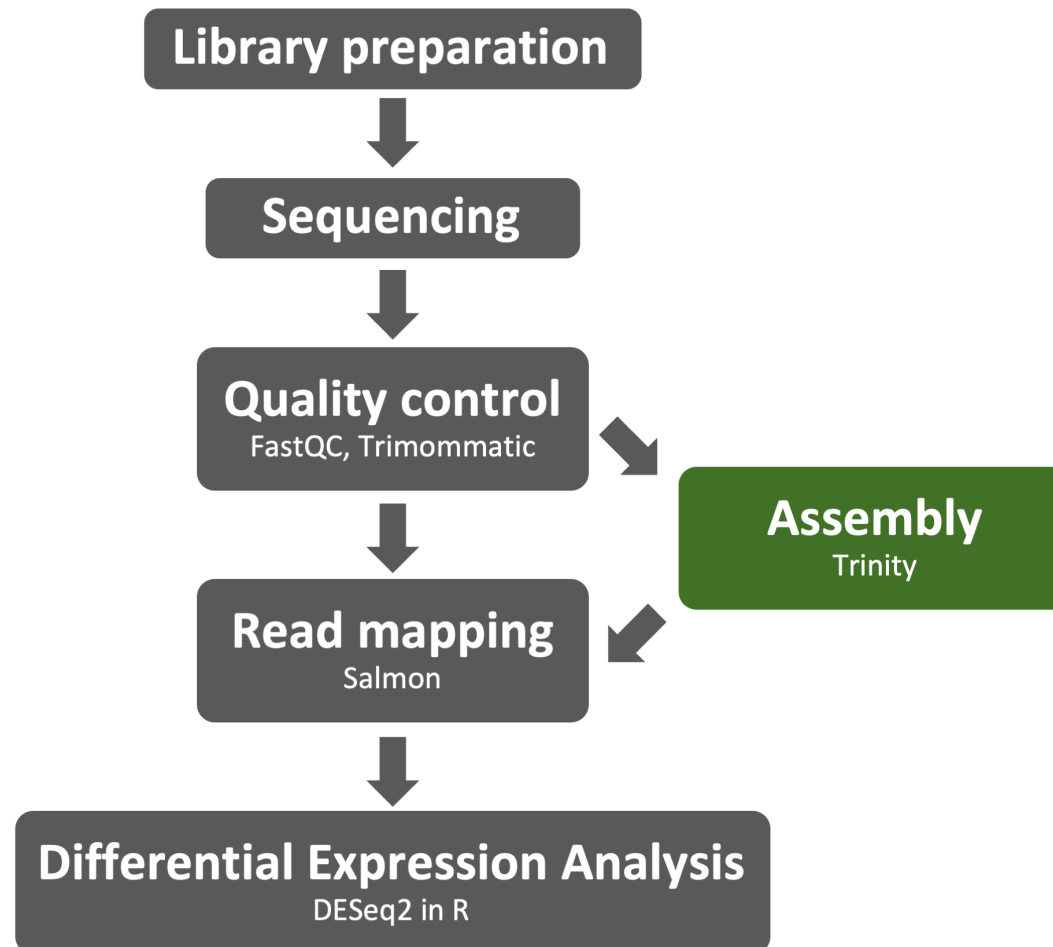
RNA-Seq

Workflow



RNA-Seq

Workflow



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Brian Haas edited this page on May 6, 2024 · [41 revisions](#)

RNA-Seq De novo Assembly Using Trinity

As of 2024, Trinity RNA-seq project no longer has dedicated funding for future development, maintenance, or support. Please kindly consider this as you post issues or are in search of assistance.



Quick Guide for the Impatient

Trinity assembles transcript sequences from Illumina RNA-Seq data.

Download Trinity [here](#).

Build Trinity by typing 'make' in the base installation directory.

<https://github.com/trinityrnaseq/trinityrnaseq/wiki>

Installing software using CONDA

Trinity (installed on Friday)

1a. Unix: Create a new environment `trinity`:

```
conda create --name trinity  
conda activate trinity
```

1b. MacOS: Create a new environment `trinity`:

```
CONDA_SUBDIR=osx-64 conda create -n trinity  
conda activate trinity  
conda env config vars set CONDA_SUBDIR=osx-64
```

Installing software using CONDA

Trinity dependencies

2. Install trinity (installed on Friday)

```
conda install trinity
```

3. Test installation

```
Trinity
```

RNA-Seq: Assembly

Running Trinity

1. Activate conda and the 'trinity' environment

```
source activate  
# source ~/miniconda3/bin/activate  
conda activate trinity
```

2. Call Trinity to read help

```
Trinity
```

3. Set species name

```
# Basename  
SPECIES="Cmeg"
```

RNA-Seq: Assembly

Running Trinity

4. Run Trinity

```
# Running
Trinity --seqType fq \
  --left ~/rnaseq/02-FilteredReads/${SPECIES}_R1_paired.fastq \
  --right ~/rnaseq/02-FilteredReads/${SPECIES}_R2_paired.fastq \
  --CPU 8 \
  --max_memory 8G \
  --output ${SPECIES}.trinity.fasta \
  --full_cleanup
```



It didn't work!

First alternative: Installing Trinity using Docker

Installing software using Docker

Issues with installation

[Incident Update: Docker Desktop for Mac. Learn more →](#)[Docs](#)[Get support](#)[Contact sales](#)

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Installing software using Docker

Issues with Trinity installation

1. Download docker.
2. Follow the instructions for installation
3. Open Docker Desktop and create a login
4. On Terminal:

```
docker --version
```

Installing software using Docker

Issues with Trinity installation

5. Download Trinity docker image

```
docker pull trinityrnaseq/trinityrnaseq
```

6. Test Trinity

```
$TRINOTATE_HOME/Trinity
```

It didn't work! AGAIN!

Second alternative



