



RNA-Seq Pipeline Overview

Analysis for Francis lab

- **Prepared for:**
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 - **Process Executed on :** Nov-16-2023
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Data Access

- **Dropbox Folder:** Francis lab_KB_wholeworm RNAseq data_March 2023_Share AW lab/August 2023 experiment
- **Dropbox URL:** <https://www.dropbox.com/scl/fo/s208bvuysgw65f42ppqlf/h?rlkey=m1n4v9nil4o3pkwkmleplmw0v&dl=0>

FASTQ files

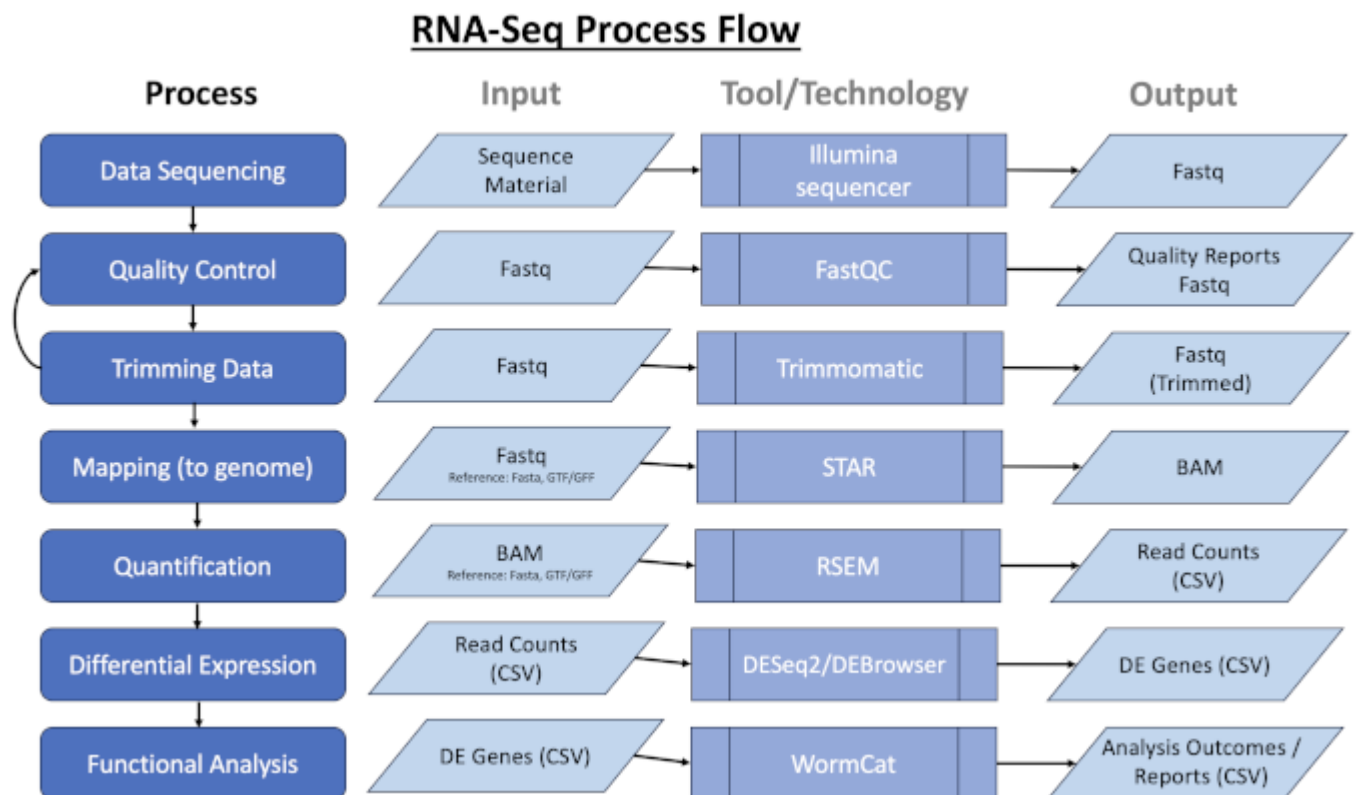
```
1.592Gi 2023-09-04 07:16:00 Harvest L4 070623/N2_set5/N2_set5_1.fq.gz
1.676Gi 2023-09-04 07:16:00 Harvest L4 070623/N2_set5/N2_set5_2.fq.gz
1.615Gi 2023-09-04 07:16:00 Harvest L4 071023/N2_set6/N2_set6_1.fq.gz
1.705Gi 2023-09-04 07:16:00 Harvest L4 071023/N2_set6/N2_set6_2.fq.gz
1.607Gi 2023-11-09 18:05:34 Harvest L4 070623/eat4_ky5_set5/ky5_L4_set5_1.fq.gz
1.698Gi 2023-10-29 22:03:00 Harvest L4 070623/eat4_ky5_set5/ky5_L4_set5_2.fq.gz
1.662Gi 2023-09-04 07:16:00 Harvest L4 071023/e113_set6/e113_set6_1.fq.gz
1.746Gi 2023-09-04 07:16:00 Harvest L4 071023/e113_set6/e113_set6_2.fq.gz
1.609Gi 2023-10-29 22:04:00 Harvest L4 071023/eat4_ky5_set7/ky5_L4_set7_1.fq.gz
1.735Gi 2023-10-29 22:04:00 Harvest L4 071023/eat4_ky5_set7/ky5_L4_set7_2.fq.gz
2.027Gi 2023-09-04 07:16:00 Harvest L4 070623/e113_set5/e113_set5_1.fq.gz
2.101Gi 2023-09-04 07:17:00 Harvest L4 070623/e113_set5/e113_set5_2.fq.gz
```



Gene Index files

Gene Index based on Wormbase Version: *WS289*

RNA Seq Process



Pipeline Outputs

- MD5 Checksum Report
- FAST QC Report
- Multi QC Report
- Isoform Quantification
- Gene Quantification
- DESeq2 Gene Normalizations (Up, Down, All Expressed) & Visualizations
- WormCat Annotations and Visualizations of gene set enrichment data



Source Code

The provided tagged repository is available to create reproducible outputs from the RNA-Seq Pipeline.

Config https://github.com/DanH-UMassMed/Francis_Lab

Pipeline <https://github.com/DanH-UMassMed/RNA-Seq-Nextflow> -r v1.0.6