

06 Jan 2025

# Daytona Dengue

Advanced Molecular Detection  
Southeast Region Bioinformatics

# Updates

## Office Hours

2025



January 20  
Amelia

February 03  
Penscola



2025

# Overview

## Purpose

- Analyze Dengue virus sequencing data to enable phylogenetic and epidemiological surveillance to support public health and researchers

## Usage

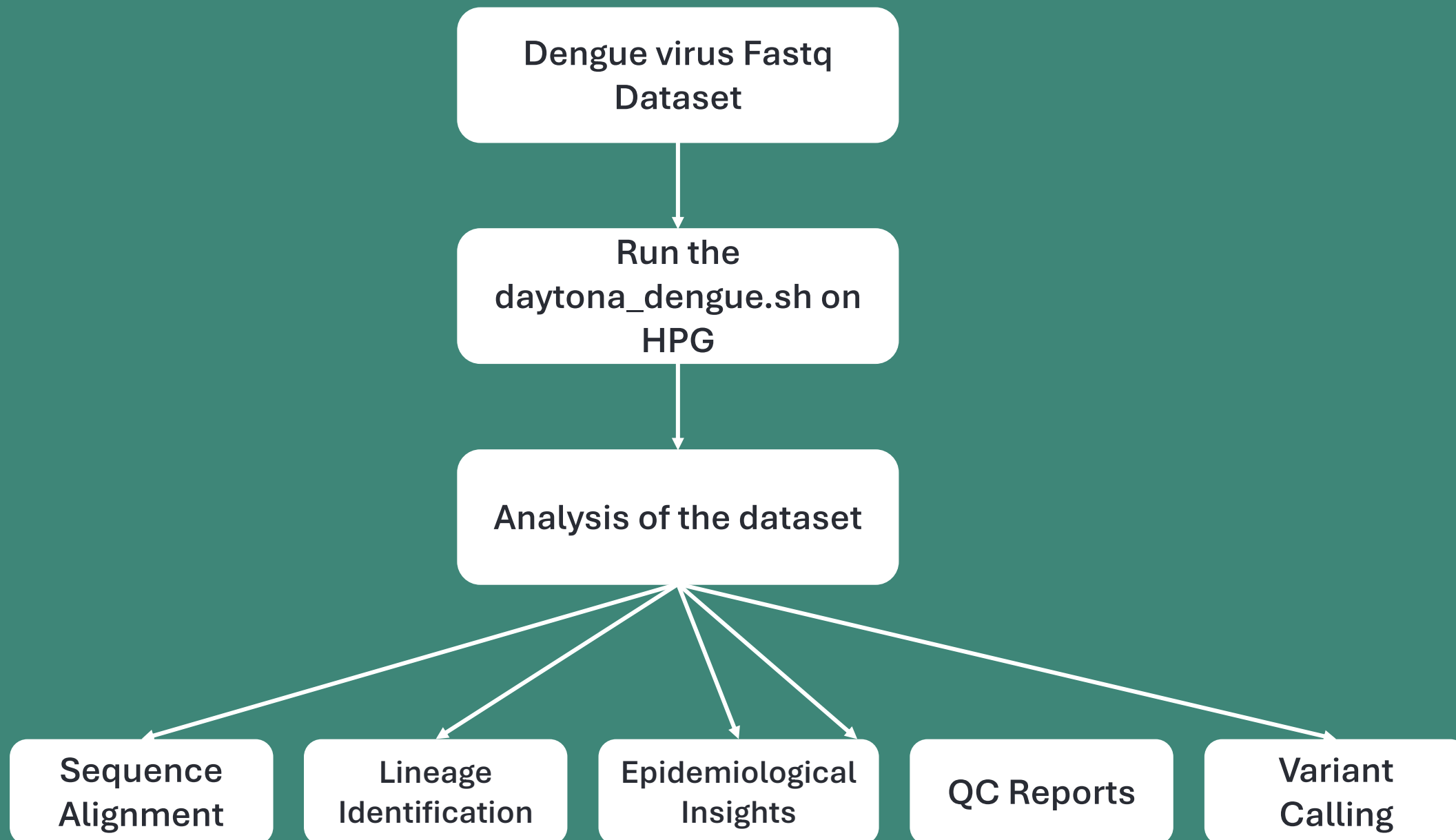
- Automate workflows for processing sequencing dataset, viral lineage identification, generate insights into Dengue virus outbreak

## Dependencies

- Nextflow
- Python3
- Singularity/Apptainer
- Docker (if needed)
- SLURM



# W o r k f l o w



## **Objective**

Use Dengue virus dataset and analyze the dataset using Daytona\_Dengue pipeline

# **Application**

# Application Cont.

```
cd /blue/bphl-<state>/<user>/repos/bphl-molecular/  
git clone https://github.com/BPHL-Molecular/Daytona_dengue  
mkdir analysis/  
cd analysis/  
cp /blue/bphl-<state>/<user>/repos/bphl-molecular/ Daytona_dengue/*  
mkdir fastqs/  
cp /path/to/fastqs/*.fastq.gz fastqs/
```

/blue/bphl-florida/n.yengalareddy/repos/bphl-molecular/analysis/Daytona\_dengue1212/

Name	Size	Changed
..		12/13/2024 1:22:02 PM
configs		12/10/2024 10:47:44 AM
fastqs		12/12/2024 2:26:56 PM
modules		12/10/2024 10:47:44 AM
output		12/12/2024 2:42:49 PM
primers		12/10/2024 10:47:44 AM
reference		12/10/2024 10:47:44 AM
work		12/12/2024 2:40:26 PM
daytona_dengue.52626148.err	3 KB	12/12/2024 2:26:52 PM
daytona_dengue.52626148.out	193 KB	12/12/2024 2:42:45 PM
daytona_dengue.nf	2 KB	12/10/2024 10:47:44 AM
daytona_dengue.sh	3 KB	12/12/2024 11:19:20 AM
kraken2_viral.sh	3 KB	12/10/2024 10:47:44 AM
LICENSE	2 KB	12/10/2024 10:47:44 AM
nextflow.config	1 KB	12/10/2024 10:47:44 AM
params.yaml	1 KB	12/12/2024 2:07:07 PM
README.md	4 KB	12/10/2024 10:47:44 AM
rename_aqp.py	1 KB	12/10/2024 10:47:44 AM
renamefile.sh	1 KB	12/10/2024 10:47:44 AM
table.py	1 KB	12/10/2024 10:47:44 AM

Name

..
J137_1.fastq.gz
J137_2.fastq.gz
J138_1.fastq.gz
J138_2.fastq.gz
J196_1.fastq.gz
J196_2.fastq.gz
J198_1.fastq.gz
J198_2.fastq.gz
J210_1.fastq.gz
J210_2.fastq.gz
J248_1.fastq.gz
J248_2.fastq.gz
J314_1.fastq.gz
J314_2.fastq.gz
J320_1.fastq.gz
J320_2.fastq.gz
J339_1.fastq.gz
J339_2.fastq.gz
J357_1.fastq.gz
J357_2.fastq.gz
J369_1.fastq.gz
J369_2.fastq.gz
T91_1.fastq.gz
T91_2.fastq.gz
T93_1.fastq.gz
T93_2.fastq.gz
T94_1.fastq.gz
T94_2.fastq.gz
T107_1.fastq.gz
T107_2.fastq.gz

# Application Cont.

**nano** daytona\_dengue.sh

```
GNU nano 2.9.8 daytona_dengue.sh

#!/bin/bash
#SBATCH --account=bphl-umbrella
#SBATCH --qos=bphl-umbrella
#SBATCH --job-name=Daytona_dengue
#SBATCH --mail-type=END,FAIL
#SBATCH --mail-user=nikhil.yengala@flhealth.gov
#SBATCH --ntasks=1
#SBATCH --cpus-per-task=25
#SBATCH --mem=100gb
#SBATCH --output=daytona_dengue.%j.out
#SBATCH --error=daytona_dengue.%j.err
#SBATCH --time=24:00:00

#module load singularity
#module load apptainer

#identify serotype of each sample
bash ./kraken2_viral.sh

#nextflow run daytona_dengue.nf -params-file params.yaml -c ./configs/singularity.config
#nextflow run daytona_dengue.nf -params-file params.yaml -c ./configs/docker.config
nextflow run daytona_dengue.nf -params-file params.yaml

sort ./output/dengue*/*/report.txt | uniq > ./output/sum_report.txt
sed -i '/sampleID\treference/d' ./output/sum_report.txt
sed -i 'li sampleID\treference\tstart\tend\ttnum_raw_reads\ttnum_clean_reads\ttnum_mapped_reads\ttpercent'
```



**activate** conda environment containing Nextflow  
&  
**sbatch** daytona\_dengue.sh

/blue/bphl-florida/n.yengalareddy/repos/bphl-molecular/analysis/Daytona\_dengue1212/

Name	Size	Changed
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work		12/12/2024 2:40:26 PM
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daytona_dengue.52626148.out	193 KB	12/12/2024 2:42:45 PM
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renamefile.sh	1 KB	12/10/2024 10:47:44 AM
table.py	1 KB	12/10/2024 10:47:44 AM

**Application  
Cont.**





/blue/bphl-florida/n.yengalareddy/repos/bphl-molecular/analysis/Daytona_dengue1212/		
Name	Size	Changed
..		12/13/2024 1:22:02 PM
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/blue/bphl-florida/n.yengalareddy/repos/bphl-molecular/analysis/Daytona_dengue1212/output/		
Name	Size	Changed
..		12/12/2024 2:42:49 PM
alignment		12/12/2024 2:42:50 PM
assembly		12/12/2024 2:42:50 PM
assembly_qc_pass		12/12/2024 2:42:51 PM
bbduk		12/12/2024 2:42:50 PM
fastqc		12/12/2024 2:42:51 PM
fastqc_clean		12/12/2024 2:42:51 PM
humanscrubber		12/12/2024 2:42:51 PM
kraken_out_broad		12/12/2024 2:26:52 PM
multiqc		12/12/2024 2:42:51 PM
report		12/12/2024 2:42:46 PM
variant		12/12/2024 2:42:51 PM
variant_qc_pass		12/12/2024 2:42:46 PM

# Application Cont.

# Application Cont.

/blue/bphl-florida/n.yengalareddy/repos/bphl-molecular/analysis/Daytona_dengue1212/output/		
Name	Size	Changed
..		12/12/2024 2:42:49 PM
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assembly_qc_pass		12/12/2024 2:42:51 PM
bbduk		12/12/2024 2:42:50 PM
fastqc		12/12/2024 2:42:51 PM
fastqc_clean		12/12/2024 2:42:51 PM
humanscrubber		12/12/2024 2:42:51 PM
kraken_out_broad		12/12/2024 2:26:52 PM
multiqc		12/12/2024 2:42:51 PM
report		12/12/2024 2:42:46 PM
variant		12/12/2024 2:42:51 PM
variant_qc_pass		12/12/2024 2:42:46 PM

/blue/bphl-florida/n.yengalareddy/repos/bphl-molecular/analysis/Daytona_dengue1212/output/report/		
Name	Size	Changed
..		12/12/2024 2:42:49 PM
final_report.txt	2 KB	12/12/2024 2:42:45 PM
Serotypes.txt	1 KB	12/12/2024 2:26:56 PM

sampleID	Seotype	Kraken2_Viral_Broad_Percentage	reference	start_end	num_raw_reads	num_clean_reads	num_mapped_reads	percent_mapped_clean_reads	cov_bases_mapped	percent_genome_cov_map	mean_depth	mean_base_qual	mean_map_qual	assembly_length	numN	percent_ref_genome_cov	VADR_flag	QC_flag
J137	3	99.86	NC_001475.2	1 10707	2545730	944692	315489	33.396	10607	99.066	5442.26	33.9	60	10607	61	98.4963	PASS	PASS
J138	1	99.67	NC_001477.1	1 10735	2142698	677254	247300	36.5151	10630	99.0219	4406.74	33.9	60	10630	145	97.6712	PASS	PASS
J196	3	99.54	NC_001475.2	1 10707	2204468	846432	306750	36.2404	10607	99.066	5403.71	33.9	60	10607	42	98.6738	PASS	PASS
J198	3	99.94	NC_001475.2	1 10707	1810828	561174	277911	49.5231	10611	99.1034	4940.98	33.9	60	10611	25	98.8699	PASS	PASS
J210	3	99.93	NC_001475.2	1 10707	3200126	869972	419654	48.2376	10645	99.4209	7482.7	33.9	60	10645	55	98.9073	PASS	PASS
J248	3	99.88	NC_001475.2	1 10707	2218980	657278	313593	47.7109	10631	99.2902	5453.58	33.9	60	10631	45	98.8699	PASS	PASS
J320	3	99.8	NC_001475.2	1 10707	2333328	795020	334283	42.0471	10647	99.4396	5885.62	33.9	60	10647	80	98.6924	PASS	PASS
J339	4	98.97	NC_002640.1	1 10649	2585884	813348	383028	47.0928	10535	98.9295	6752.18	33.9	60	10536	0	98.9389	PASS	PASS
J357	3	99.91	NC_001475.2	1 10707	2439324	834960	343609	41.1527	10593	98.9353	6117.21	33.9	60	10593	40	98.5617	PASS	PASS
J369	3	99.9	NC_001475.2	1 10707	2159956	713284	306546	42.9767	10614	99.1314	5426.65	33.9	60	10614	68	98.4963	PASS	PASS
T107	3	99.71	NC_001475.2	1 10707	4441408	1689034	385826	22.843	10570	98.7205	6520.38	33.9	60	10570	24	98.4963	PASS	PASS
T91	3	99.83	NC_001475.2	1 10707	1964724	640908	265534	41.4309	10589	98.8979	4552.61	33.9	60	10589	48	98.4496	PASS	PASS
T93	4	96.56	NC_002640.1	1 10649	6136086	2304382	537142	23.3096	10510	98.6947	9528.34	33.9	60	10511	45	98.2815	PASS	PASS
T94	3	93.96	NC_001475.2	1 10707	2433604	1038052	113476	10.9316	10043	93.7984	1709.94	33.9	60	10562	1646	83.2726	REVIEW	PASS

# Application Cont.

/blue/bphl-florida/n.yengalareddy/repos/bphl-molecular/analysis/Daytona_dengue1212/output/report/		
Name	Size	Changed
..		12/12/2024 2:42:49 PM
x final_report.txt	2 KB	12/12/2024 2:42:45 PM
x Serotypes.txt	1 KB	12/12/2024 2:26:56 PM

Sample,Serotype,Confidence

J137,3, 99.86

J138,1, 99.67

J196,3, 99.54

J198,3, 99.94

J210,3, 99.93

J248,3, 99.88

J314,3, 8.76

J320,3, 99.80

J339,4, 98.97

J357,3, 99.91

J369,3, 99.90

T107,3, 99.71

T91,3, 99.83

T93,4, 96.56

T94,3, 93.96



/blue/bphl-florida/n.yengalareddy/repos/bphl-molecular/analysis/Daytona_dengue1212/output/		
Name	Size	Changed
..		12/12/2024 2:42:49 PM
alignment		12/12/2024 2:42:50 PM
assembly		12/12/2024 2:42:50 PM
assembly_qc_pass		12/12/2024 2:42:51 PM
bbduk		12/12/2024 2:42:50 PM
fastqc		12/12/2024 2:42:51 PM
fastqc_clean		12/12/2024 2:42:51 PM
humanscrubber		12/12/2024 2:42:51 PM
kraken_out_broad		12/12/2024 2:26:52 PM
multiqc		12/12/2024 2:42:51 PM
report		12/12/2024 2:42:46 PM
variant		12/12/2024 2:42:51 PM
variant_qc_pass		12/12/2024 2:42:46 PM

/blue/bphl-florida/n.yengalareddy/repos/bphl-molecular/analysis/Daytona_dengue1212/output/alignment/		
Name	Size	Changed
..		12/12/2024 2:42:49 PM
x J137.coverage.txt	1 KB	12/12/2024 2:33:49 PM
J137.dedup.bam	14,395 KB	12/12/2024 2:33:30 PM
J137.fixmate.bam	62,355 KB	12/12/2024 2:33:12 PM
J137.markdup.bam	36,143 KB	12/12/2024 2:33:26 PM
J137.mpileup	80,363 KB	12/12/2024 2:33:52 PM
J137.namesorted.bam	58,897 KB	12/12/2024 2:33:02 PM
J137.positionsort.bam	35,829 KB	12/12/2024 2:33:19 PM
J137.primertrim.bam	13,690 KB	12/12/2024 2:33:42 PM
J137.primertrim.sorted.bam	13,750 KB	12/12/2024 2:33:46 PM

#rname	startpos	endpos	numreads	covbases	coverage	meandepth	meanbaseq	meanmapq
NC_001475.2	1	10707	315489	10607	99.066	5442.26	33.9	60

Application  
Cont.

/blue/bphl-florida/n.yengalareddy/repos/bphl-molecular/analysis/Daytona_dengue1212/output/		
Name	Size	Changed
..		12/12/2024 2:42:49 PM
alignment		12/12/2024 2:42:50 PM
assembly		12/12/2024 2:42:50 PM
assembly_qc_pass		12/12/2024 2:42:51 PM
bbduk		12/12/2024 2:42:50 PM
fastqc		12/12/2024 2:42:51 PM
fastqc_clean		12/12/2024 2:42:51 PM
humanscrubber		12/12/2024 2:42:51 PM
kraken_out_broad		12/12/2024 2:26:52 PM
multiqc		12/12/2024 2:42:51 PM
report		12/12/2024 2:42:46 PM
variant		12/12/2024 2:42:51 PM
variant_qc_pass		12/12/2024 2:42:46 PM

/blue/bphl-florida/n.yengalareddy/repos/bphl-molecular/analysis/Daytona_dengue1212/output/assembly/		
Name	Size	Changed
..		12/12/2024 2:42:49 PM
J137_vadr_results		12/12/2024 2:35:46 PM
J138_vadr_results		12/12/2024 2:34:37 PM
J196_vadr_results		12/12/2024 2:35:10 PM
J198_vadr_results		12/12/2024 2:34:19 PM
J210_vadr_results		12/12/2024 2:37:20 PM
J248_vadr_results		12/12/2024 2:35:05 PM
J320_vadr_results		12/12/2024 2:35:38 PM
J339_vadr_results		12/12/2024 2:35:58 PM
J357_vadr_results		12/12/2024 2:35:50 PM
J369_vadr_results		12/12/2024 2:35:01 PM
T91_vadr_results		12/12/2024 2:34:12 PM
T93_vadr_results		12/12/2024 2:42:44 PM
T94_vadr_results		12/12/2024 2:34:03 PM
T107_vadr_results		12/12/2024 2:39:04 PM
J137.consensus.fa	11 KB	12/12/2024 2:34:37 PM
J137.consensus.qual.txt	11 KB	12/12/2024 2:34:29 PM
J137.trimmed.fasta	11 KB	12/12/2024 2:34:38 PM
J138.consensus.fa	11 KB	12/12/2024 2:33:27 PM
J138.consensus.qual.txt	11 KB	12/12/2024 2:33:19 PM
J138.trimmed.fasta	11 KB	12/12/2024 2:33:28 PM
J196.consensus.fa	11 KB	12/12/2024 2:34:00 PM
J196.consensus.qual.txt	11 KB	12/12/2024 2:33:52 PM
J196.trimmed.fasta	11 KB	12/12/2024 2:34:01 PM
J198.consensus.fa	11 KB	12/12/2024 2:33:09 PM
J198.consensus.qual.txt	11 KB	12/12/2024 2:33:01 PM
J198.trimmed.fasta	11 KB	12/12/2024 2:33:09 PM
J210.consensus.fa	11 KB	12/12/2024 2:36:14 PM
J210.consensus.qual.txt	11 KB	12/12/2024 2:36:03 PM
J210.trimmed.fasta	11 KB	12/12/2024 2:36:15 PM
J248.consensus.fa	11 KB	12/12/2024 2:33:56 PM
J248.consensus.qual.txt	11 KB	12/12/2024 2:33:47 PM
J248.trimmed.fasta	11 KB	12/12/2024 2:33:56 PM
J320.consensus.fa	11 KB	12/12/2024 2:34:30 PM
J320.consensus.qual.txt	11 KB	12/12/2024 2:34:22 PM
J320.trimmed.fasta	11 KB	12/12/2024 2:34:31 PM

/blue/bphl-florida/n.yengalareddy/repos/bphl-molecular/analysis/Daytona_dengue1212/output/assembly_qc_pass/		
Name	Size	Changed
..		12/12/2024 2:42:49 PM
SER_del		12/12/2024 2:42:51 PM
J137.consensus.fa	11 KB	12/12/2024 2:34:37 PM
J138.consensus.fa	11 KB	12/12/2024 2:33:27 PM
J196.consensus.fa	11 KB	12/12/2024 2:34:00 PM
J198.consensus.fa	11 KB	12/12/2024 2:33:09 PM
J210.consensus.fa	11 KB	12/12/2024 2:36:14 PM
J248.consensus.fa	11 KB	12/12/2024 2:33:56 PM
J320.consensus.fa	11 KB	12/12/2024 2:34:30 PM
J339.consensus.fa	11 KB	12/12/2024 2:34:50 PM
J357.consensus.fa	11 KB	12/12/2024 2:34:42 PM
J369.consensus.fa	11 KB	12/12/2024 2:33:52 PM
T91.consensus.fa	11 KB	12/12/2024 2:33:00 PM
T93.consensus.fa	11 KB	12/12/2024 2:41:39 PM
T94.consensus.fa	11 KB	12/12/2024 2:32:51 PM
T107.consensus.fa	11 KB	12/12/2024 2:37:58 PM

/blue/bphl-florida/n.yengalareddy/repos/bphl-molecular/analysis/Daytona_dengue1212/output/bbduk/		
Name	Size	Changed
..		12/12/2024 2:42:49 PM
J137_1.fq.gz	35,061 KB	12/12/2024 2:30:06 PM
J137_2.fq.gz	32,838 KB	12/12/2024 2:30:06 PM
J138_1.fq.gz	26,068 KB	12/12/2024 2:29:36 PM
J138_2.fq.gz	24,134 KB	12/12/2024 2:29:36 PM
J196_1.fq.gz	32,114 KB	12/12/2024 2:29:43 PM
J196_2.fq.gz	29,933 KB	12/12/2024 2:29:43 PM
J198_1.fq.gz	22,841 KB	12/12/2024 2:29:35 PM
J198_2.fq.gz	20,950 KB	12/12/2024 2:29:35 PM
J210_1.fq.gz	35,839 KB	12/12/2024 2:31:19 PM
J210_2.fq.gz	33,091 KB	12/12/2024 2:31:19 PM

Application  
Cont.



# Application Cont.

/blue/bphl-florida/n.yengalareddy/repos/bphl-molecular/analysis/Daytona\_dengue1212/output/

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variant		12/12/2024 2:42:51 PM
variant_qc_pass		12/12/2024 2:42:46 PM

/blue/bphl-florida/n.yengalareddy/repos/bphl-molecular/analysis/Daytona\_dengue1212/output/fastqc/

Name	Size	Changed
..		12/12/2024 2:42:49 PM
J137_1_original_fastqc.html	688 KB	12/12/2024 2:27:2
J137_1_original_fastqc.zip	396 KB	12/12/2024 2:27:2
J137_2_original_fastqc.html	707 KB	12/12/2024 2:27:4
J137_2_original_fastqc.zip	410 KB	12/12/2024 2:27:4
J138_1_original_fastqc.html	691 KB	12/12/2024 2:27:2
J138_1_original_fastqc.zip	397 KB	12/12/2024 2:27:2
J138_2_original_fastqc.html	711 KB	12/12/2024 2:27:3
J138_2_original_fastqc.zip	418 KB	12/12/2024 2:27:3
J196_1_original_fastqc.html	688 KB	12/12/2024 2:27:2
J196_1_original_fastqc.zip	397 KB	12/12/2024 2:27:2

/blue/bphl-florida/n.yengalareddy/repos/bphl-molecular/analysis/Daytona\_dengue1212/output/fastqc\_clean/

Name	Size	Changed
..		12/12/2024 2:42:49 PM
J137_1_clean_fastqc.html	662 KB	12/12/2024 2:30:15 PM
J137_1_clean_fastqc.zip	384 KB	12/12/2024 2:30:15 PM
J137_2_clean_fastqc.html	671 KB	12/12/2024 2:30:20 PM
J137_2_clean_fastqc.zip	399 KB	12/12/2024 2:30:20 PM
J138_1_clean_fastqc.html	658 KB	12/12/2024 2:29:45 PM
J138_1_clean_fastqc.zip	378 KB	12/12/2024 2:29:45 PM
J138_2_clean_fastqc.html	669 KB	12/12/2024 2:29:50 PM
J138_2_clean_fastqc.zip	397 KB	12/12/2024 2:29:50 PM
J196_1_clean_fastqc.html	654 KB	12/12/2024 2:29:52 PM
J196_1_clean_fastqc.zip	377 KB	12/12/2024 2:29:52 PM
J196_2_clean_fastqc.html	667 KB	12/12/2024 2:30:57 PM
J196_2_clean_fastqc.zip	397 KB	12/12/2024 2:30:57 PM

/blue/bphl-florida/n.yengalareddy/repos/bphl-molecular/analysis/Daytona\_dengue1212/output/humanscrubber/

Name	Size	Changed
..		12/12/2024 2:42:49 PM
J137_1_humanclean.fastq.gz	59,573 KB	12/12/2024 2:28:00 PM
J137_2_humanclean.fastq.gz	66,128 KB	12/12/2024 2:28:04 PM
J138_1_humanclean.fastq.gz	47,632 KB	12/12/2024 2:27:55 PM
J138_2_humanclean.fastq.gz	56,805 KB	12/12/2024 2:27:59 PM
J196_1_humanclean.fastq.gz	52,073 KB	12/12/2024 2:27:55 PM
J196_2_humanclean.fastq.gz	58,127 KB	12/12/2024 2:27:59 PM
J198_1_humanclean.fastq.gz	53,460 KB	12/12/2024 2:27:52 PM
J198_2_humanclean.fastq.gz	60,750 KB	12/12/2024 2:27:56 PM

# Application Cont.

/blue/bphl-florida/n.yengalareddy/repos/bphl-molecular/analysis/Daytona_dengue1212/output/		
Name	Size	Changed
..		12/12/2024 2:42:49 PM
alignment		12/12/2024 2:42:50 PM
assembly		12/12/2024 2:42:50 PM
assembly_qc_pass		12/12/2024 2:42:51 PM
bbduk		12/12/2024 2:42:50 PM
fastqc		12/12/2024 2:42:51 PM
fastqc_clean		12/12/2024 2:42:51 PM
humanscrubber		12/12/2024 2:42:51 PM
kraken_out_broad		12/12/2024 2:26:52 PM
multiqc		12/12/2024 2:42:51 PM
report		12/12/2024 2:42:46 PM
variant		12/12/2024 2:42:51 PM
variant_qc_pass		12/12/2024 2:42:46 PM

/blue/bphl-florida/n.yengalareddy/repos/bphl-molecular/analysis/Daytona_dengue1212/output/kraken_out_broad/		
Name	Size	Changed
..		12/12/2024 2:42:49 PM
J137.report	9 KB	12/12/2024 2:21:30 PM
J137_kraken.out	335,263 KB	12/12/2024 2:21:28 PM
J138.report	9 KB	12/12/2024 2:21:54 PM
J138_kraken.out	338,670 KB	12/12/2024 2:21:52 PM
J196.report	10 KB	12/12/2024 2:22:15 PM
J196_kraken.out	299,508 KB	12/12/2024 2:22:14 PM
J198.report	7 KB	12/12/2024 2:22:36 PM
J198_kraken.out	262,203 KB	12/12/2024 2:22:35 PM
J210.report	9 KB	12/12/2024 2:23:02 PM
J210_kraken.out	454,727 KB	12/12/2024 2:23:00 PM

0.04	478	478 U	0 unclassified		
99.96	1272387	3 R	1 root		
99.88	1271395	0 D	10239 Viruses		
99.88	1271395	0 D1	2559587 Riboviria		
99.88	1271395	0 F	11050 Flaviviridae		
99.88	1271395	12 G	11051 Flavivirus		
99.88	1271383	332 S	12637 Dengue virus		
99.86	1271034	1271034 S1	11069 Dengue virus 3		
0	16	16 S1	11053 Dengue virus 1		
0	1	1 S1	11070 Dengue virus 4		
0.08	987	3 R1	131567 cellular organisms		
0.08	957	11 D	2759 Eukaryota		
0.07	897	0 D1	33154 Opisthokonta		
0.07	897	0 K	33208 Metazoa		
0.07	897	0 K1	6072 Eumetazoa		
0.07	897	0 K2	33213 Bilateria		
0.07	897	0 K3	33511 Deuterostomia		
0.07	897	0 P	7711 Chordata		
0.07	897	0 P1	89593 Craniata		
0.07	897	0 P2	7742 Vertebrata		
0.07	897	0 P3	7776 Gnathostomata		
0.07	897	0 P4	117570 Teleostomi		
0.07	897	0 P5	117571 Euteleostomi		
0.07	897	0 P6	8287 Sarcopterygii		
0.07	897	0 P7	1338369 Dipnotetrapodomorpha		
0.07	897	0 P8	32523 Tetrapoda		
0.07	897	0 P9	32524 Amniota		
0.07	897	0 C	40674 Mammalia		
0.07	897	0 C1	32525 Theria		
0.07	897	0 C2	9347 Eutheria		
0.07	897	0 C3	1437010 Boreoeutheria		
0.07	897	0 C4	314146 Euarchontoglires		
0.07	897	0 O	9443 Primates		
0.07	897	0 O1	376913 Haplorrhini		
0.07	897	0 O2	314293 Simiiformes		
0.07	897	0 O3	9526 Catarrhini		
0.07	897	0 O4	314295 Hominoidea		
0.07	897	0 F	9604 Hominidae		
0.07	897	0 F1	207598 Homininae		
0.07	897	0 G	9605 Homo		
0.07	897	897 S	9606 Homo sapiens		





/blue/bphl-florida/n.yengalareddy/repos/bphl-molecular/analysis/Daytona_dengue1212/output/		
Name	Size	Changed
..		12/12/2024 2:42:49 PM
alignment		12/12/2024 2:42:50 PM
assembly		12/12/2024 2:42:50 PM
assembly_qc_pass		12/12/2024 2:42:51 PM
bbduk		12/12/2024 2:42:50 PM
fastqc		12/12/2024 2:42:51 PM
fastqc_clean		12/12/2024 2:42:51 PM
humanscrubber		12/12/2024 2:42:51 PM
kraken_out_broad		12/12/2024 2:26:52 PM
multiqc		12/12/2024 2:42:51 PM
report		12/12/2024 2:42:46 PM
variant		12/12/2024 2:42:51 PM
variant_qc_pass		12/12/2024 2:42:46 PM

/blue/bphl-florida/n.yengalareddy/repos/bphl-molecular/analysis/Daytona_dengue1212/output/multiqc/		
Name	Size	Changed
..		12/12/2024 2:42:4
J137_multiqc_data		12/12/2024 2:30:2
J138_multiqc_data		12/12/2024 2:29:5
J196_multiqc_data		12/12/2024 2:30:0
J198_multiqc_data		12/12/2024 2:29:5
J210_multiqc_data		12/12/2024 2:31:4
J248_multiqc_data		12/12/2024 2:30:2
J320_multiqc_data		12/12/2024 2:30:2
J339_multiqc_data		12/12/2024 2:30:4
J357_multiqc_data		12/12/2024 2:30:3
J369_multiqc_data		12/12/2024 2:30:1
T91_multiqc_data		12/12/2024 2:29:5
T93_multiqc_data		12/12/2024 2:33:4
T94_multiqc_data		12/12/2024 2:29:5
T107_multiqc_data		12/12/2024 2:31:5

/.../repos/bphl-molecular/analysis/Daytona_dengue1212/output/multiqc/J137_multiqc_data/		
Name	Size	Changed
..		12/12
multiqc.log	17 KB	12/12
multiqc_data.json	140 KB	12/12
multiqc_fastqc.txt	1 KB	12/12
multiqc_general_stats.txt	1 KB	12/12
multiqc_qualimap_bamqc_genome_results.txt	1 KB	12/12
multiqc_sources.txt	1 KB	12/12

Sample	FastQC_mqc-generalstats-fastqc-percent_gc	FastQC_mqc-generalstats-fastqc-percent_fails	FastQC_mqc-generalstats-fastqc-percent_duplicates	FastQC_mqc-generalstats-fastqc-avg_sequence_length	FastQC_mqc-generalstats-fastqc-total_sequences
SER3_J137_1	46	18.18181818	92.55294159	202.6867201	1272865
SER3_J137_2	46	36.36363636	92.69789019	202.712715	1272865

Application  
Cont.



/blue/bphl-florida/n.yengalareddy/repos/bphl-molecular/analysis/Daytona_dengue1212/output/		
Name	Size	Changed
..		12/12/2024 2:42:49 PM
alignment		12/12/2024 2:42:50 PM
assembly		12/12/2024 2:42:50 PM
assembly_qc_pass		12/12/2024 2:42:51 PM
bbduk		12/12/2024 2:42:50 PM
fastqc		12/12/2024 2:42:51 PM
fastqc_clean		12/12/2024 2:42:51 PM
humanscrubber		12/12/2024 2:42:51 PM
kraken_out_broad		12/12/2024 2:26:52 PM
multiqc		12/12/2024 2:42:51 PM
report		12/12/2024 2:42:46 PM
variant		12/12/2024 2:42:51 PM
variant_qc_pass		12/12/2024 2:42:46 PM

/.../n.yengalareddy/repos/bphl-molecular/analysis/Daytona_dengue1212/output/variant/		
Name	Size	Ch
..		12
* J137.variants.tsv	34 KB	12
* J138.variants.tsv	67 KB	12
* J196.variants.tsv	34 KB	12
* J198.variants.tsv	35 KB	12
* J210.variants.tsv	35 KB	12
* J248.variants.tsv	35 KB	12
* J320.variants.tsv	36 KB	12
* J339.variants.tsv	27 KB	12
* J357.variants.tsv	35 KB	12
* J369.variants.tsv	35 KB	12
* T91.variants.tsv	34 KB	12
* T93.variants.tsv	26 KB	12
* T94.variants.tsv	29 KB	12
* T107.variants.tsv	35 KB	12

REGION	POS	REF	ALT	REF_DP	REF_RV	REF_QUAL	ALT_DP	ALT_RV	ALT_QUAL	ALT_FREQ	TOTAL_DP	PVAL	PASS	GFF_FEAT	REF_COD	REF_AA	ALT_COD	ALT_AA	POS_AA
NC_00147	65	G	A	2	1	34	1990	403	43	0.998996	1992	0	TRUE	NA	NA	NA	NA	NA	NA
NC_00147	69	G	#NAME?	2034	405	43	2605	0	20	0.992381	2625	0	TRUE	NA	NA	NA	NA	NA	NA
NC_00147	70	T	G	12	1	49	85	0	52	0.876289	97	#####	TRUE	NA	NA	NA	NA	NA	NA
NC_00147	203	C	T	0	0	0	4716	499	57	1	4716	0	TRUE	NA	NA	NA	NA	NA	NA
NC_00147	235	T	C	5	0	61	4629	432	57	0.998706	4635	0	TRUE	NA	NA	NA	NA	NA	NA
NC_00147	250	T	C	2	0	68	4609	429	57	0.99935	4612	0	TRUE	NA	NA	NA	NA	NA	NA
NC_00147	256	C	T	0	0	0	4605	422	57	1	4605	0	TRUE	NA	NA	NA	NA	NA	NA
NC_00147	265	A	G	1	0	34	4398	399	57	0.999773	4399	0	TRUE	NA	NA	NA	NA	NA	NA
NC_00147	289	C	T	1	0	68	4160	575	56	0.999279	4163	0	TRUE	NA	NA	NA	NA	NA	NA
NC_00147	295	T	C	0	0	0	4105	615	56	1	4105	0	TRUE	NA	NA	NA	NA	NA	NA

# Application Cont.



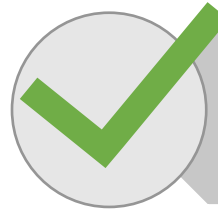
# Application Cont.

/blue/bphl-florida/n.yengalareddy/repos/bphl-molecular/analysis/Daytona_dengue1212/output/		
Name	Size	Changed
..		12/12/2024 2:42:49 PM
alignment		12/12/2024 2:42:50 PM
assembly		12/12/2024 2:42:50 PM
assembly_qc_pass		12/12/2024 2:42:51 PM
bbduk		12/12/2024 2:42:50 PM
fastqc		12/12/2024 2:42:51 PM
fastqc_clean		12/12/2024 2:42:51 PM
humanscrubber		12/12/2024 2:42:51 PM
kraken_out_broad		12/12/2024 2:26:52 PM
multiqc		12/12/2024 2:42:51 PM
report		12/12/2024 2:42:46 PM
variant		12/12/2024 2:42:51 PM
variant_qc_pass		12/12/2024 2:42:46 PM

/.../n.yengalareddy/repos/bphl-molecular/analysis/Daytona_dengue1212/output/variant_qc_pass/		
Name	Size	Changed
..		12/12/2024
J137.variants.tsv	34 KB	12/12/2024
J138.variants.tsv	67 KB	12/12/2024
J196.variants.tsv	34 KB	12/12/2024
J198.variants.tsv	35 KB	12/12/2024
J210.variants.tsv	35 KB	12/12/2024
J248.variants.tsv	35 KB	12/12/2024
J320.variants.tsv	36 KB	12/12/2024
J339.variants.tsv	27 KB	12/12/2024
J357.variants.tsv	35 KB	12/12/2024
J369.variants.tsv	35 KB	12/12/2024
T91.variants.tsv	34 KB	12/12/2024
T93.variants.tsv	26 KB	12/12/2024
T94.variants.tsv	29 KB	12/12/2024
T107.variants.tsv	35 KB	12/12/2024

REGION	POS	REF	ALT	REF_DP	REF_RV	REF_QUAL	ALT_DP	ALT_RV	ALT_QUAL	ALT_FREQ	TOTAL_DP	PVAL	PASS	GFF_FEATURE	REF_CODON	REF_AA	ALT_CODON	ALT_AA	POS_AA
NC_001475.2	65	G	A	2	1	34	1990	403	43	0.998996	1992		0	TRUE	NA	NA	NA	NA	NA
NC_001475.2	69	G	#NAME?	2034	405	43	2605	0	20	0.992381	2625		0	TRUE	NA	NA	NA	NA	NA
NC_001475.2	70	T	G	12	1	49	85	0	52	0.876289	97	1.42E-150	TRUE	NA	NA	NA	NA	NA	NA
NC_001475.2	203	C	T	0	0	0	4716	499	57	1	4716		0	TRUE	NA	NA	NA	NA	NA
NC_001475.2	235	T	C	5	0	61	4629	432	57	0.998706	4635		0	TRUE	NA	NA	NA	NA	NA
NC_001475.2	250	T	C	2	0	68	4609	429	57	0.99935	4612		0	TRUE	NA	NA	NA	NA	NA
NC_001475.2	256	C	T	0	0	0	4605	422	57	1	4605		0	TRUE	NA	NA	NA	NA	NA
NC_001475.2	265	A	G	1	0	34	4398	399	57	0.999773	4399		0	TRUE	NA	NA	NA	NA	NA
NC_001475.2	289	C	T	1	0	68	4160	575	56	0.999279	4163		0	TRUE	NA	NA	NA	NA	NA

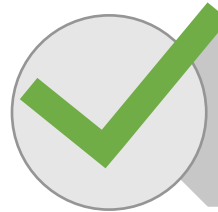
# Conclusion



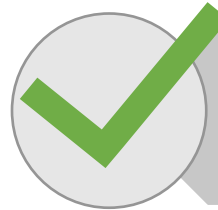
Fundamentals of  
Daytona Dengue



Installation and setup of  
Daytona Dengue in HPG



Successfully executed  
Job query for Daytona  
Dengue



Generated Output Files





# Advanced Molecular Detection

## Southeast Region Bioinformatics

# Questions?

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