## **MJOLNIR3**:

from raw sequences to manageable data

Adrià Antich

#### Software used

R / Bash / Python

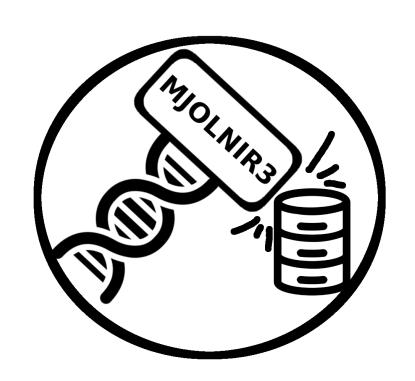
OBITOOLS3

vsearch

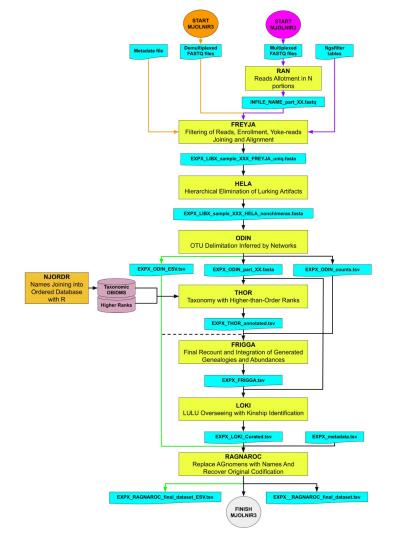
**SWARM** 

DnoisE

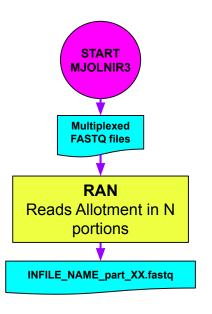
lulu

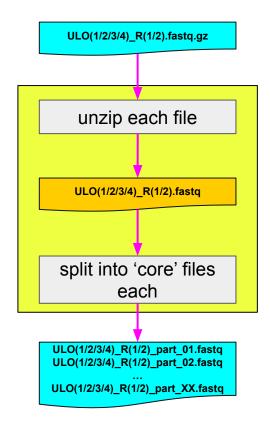


- 1. RAN: Reads Allotment in N portions
- 2. FREYJA: Filtering of Reads, Enrollment, Yoke-reads Joining and Alignment
- 3. HELA: Hierarchical Elimination of Lurking Artifacts
- 4. ODIN: OTU Delimitation Inferred by Networks
- 5. THOR: Taxonomy with Higher-than-Order Ranks
- 6. FRIGGA: Final Recount and Integration of Generated Genealogies and Abundances
- 7. LOKI: LULU Overseeing with Kinship Identification
- 8. RAGNAROC: Replace AGnomens with Names And Recover Original Codification



## **RAN**: Reads Allotment in N portions





"[1] The MAGENTA WAY" Multiplexed libraries

FREYJA: Filtering of Reads, Enrollment, Yoke-reads

**Ngsfilter** 

tables

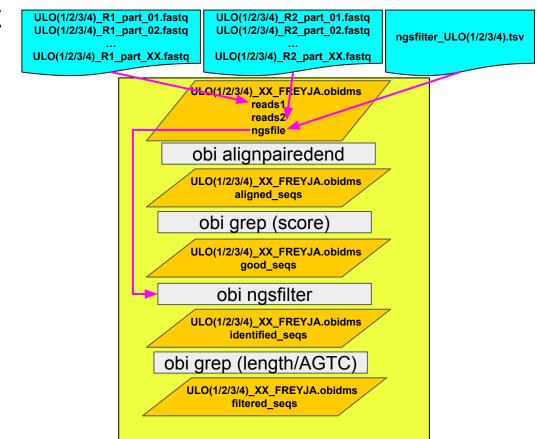
Joining and Alignment

INFILE\_NAME\_part\_XX.fastq

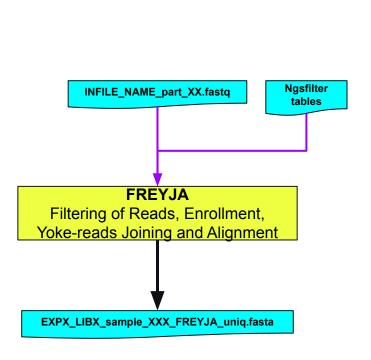
**FREYJA** 

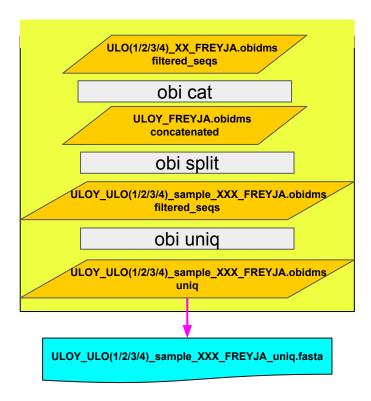
Filtering of Reads, Enrollment, Yoke-reads Joining and Alignment

EXPX\_LIBX\_sample\_XXX\_FREYJA\_uniq.fasta



# **FREYJA:** Filtering of Reads, Enrollment, Yoke-reads Joining and Alignment



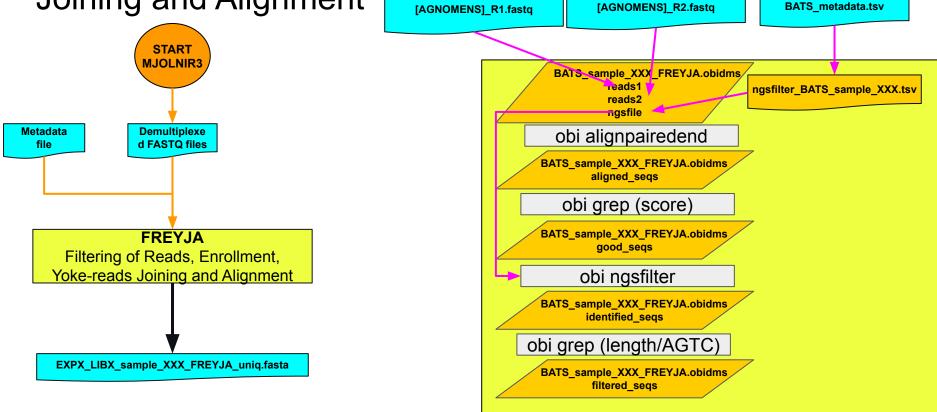


"[2] The ORANGE WAY"

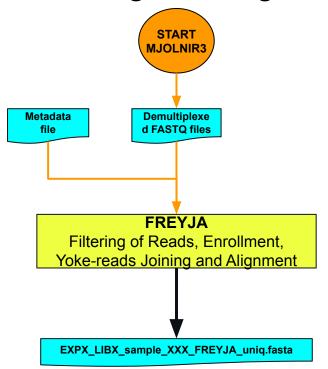
Demultiplexed libraries

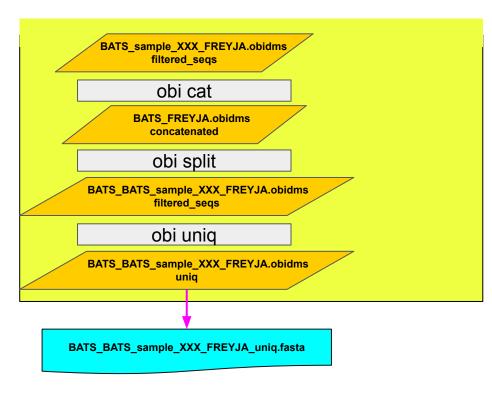
FREYJA: Filtering of Reads, Enrollment, Yoke-reads

Joining and Alignment

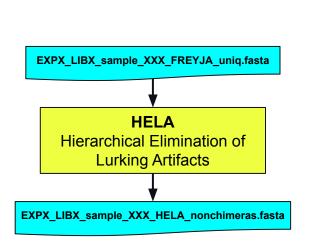


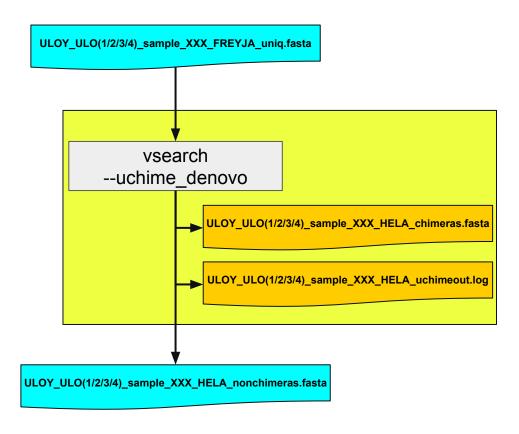
# **FREYJA:** Filtering of Reads, Enrollment, Yoke-reads Joining and Alignment

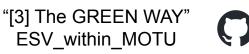


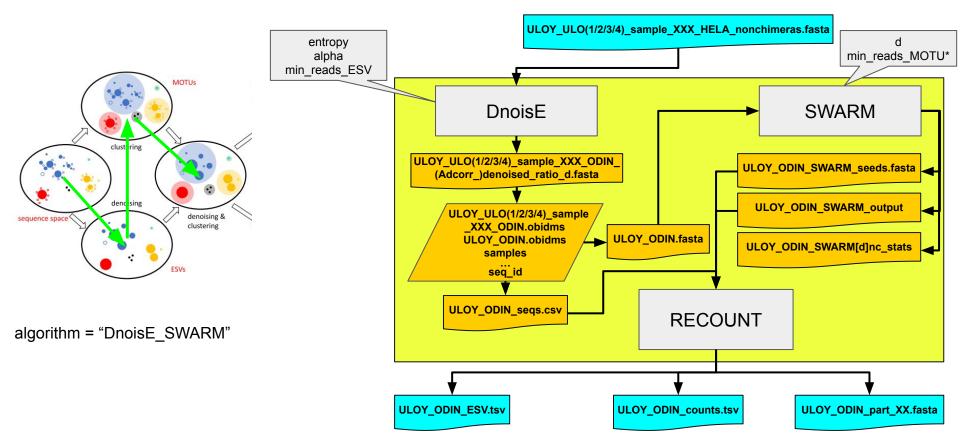


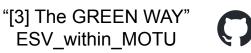
### **HELA:** Hierarchical Elimination of Lurking Artifacts

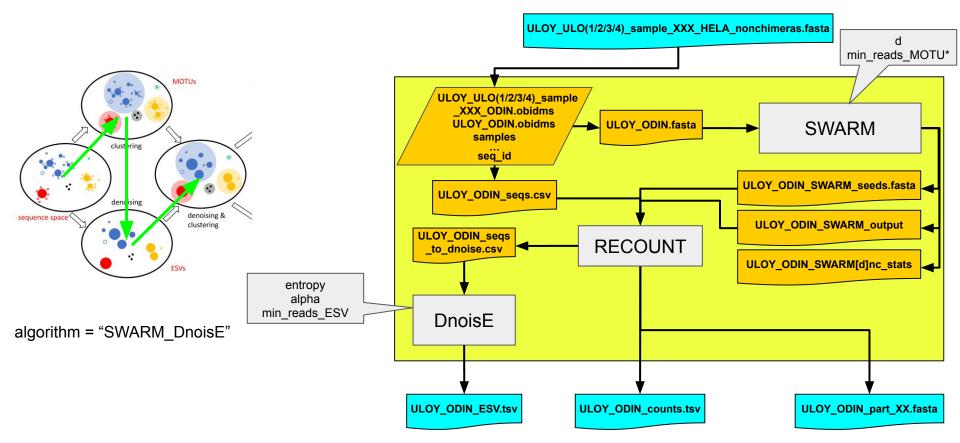


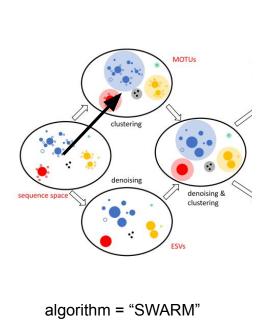


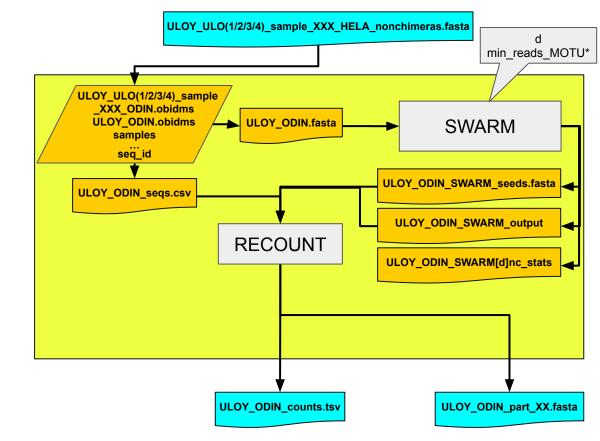


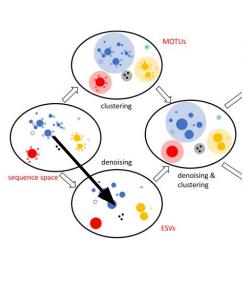




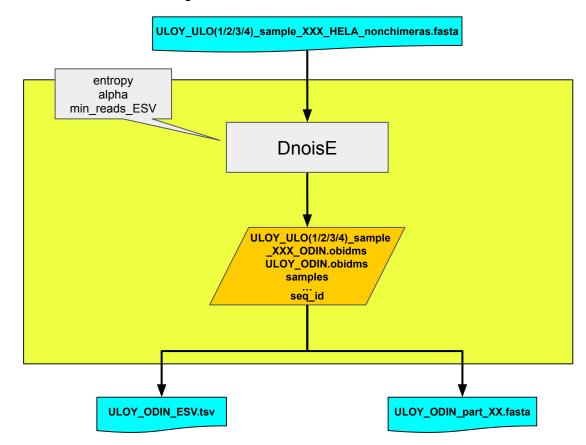








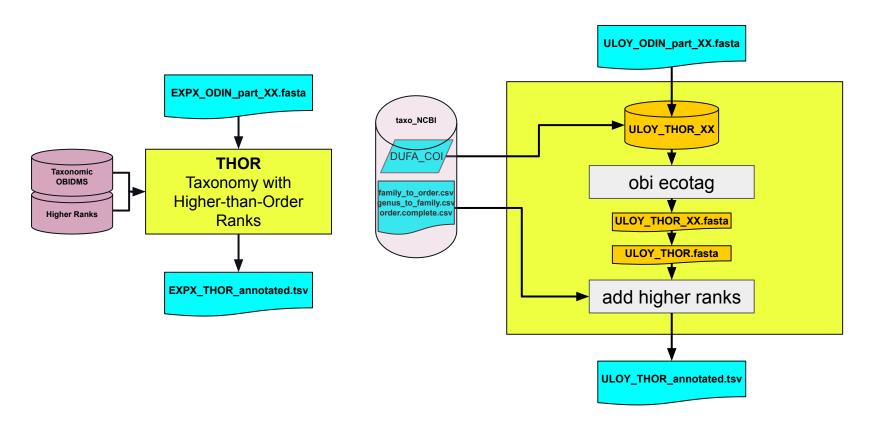
algorithm = "DnoisE"



## **NJORDR:** Names Joining into Ordered Database with R for MJOLNIR3 pipeline

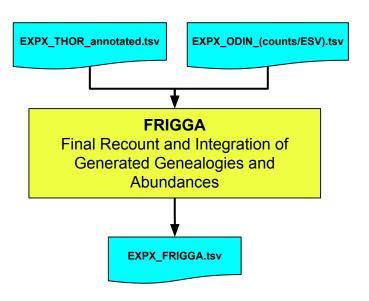


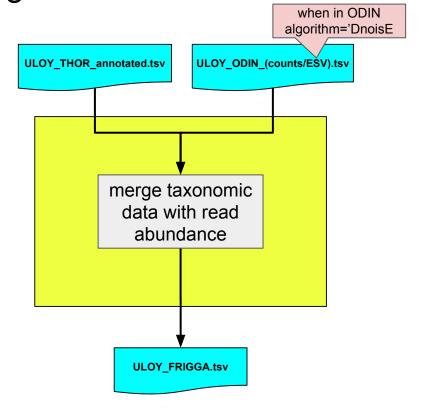
### **THOR:** Taxonomy with Higher-than-Order Ranks



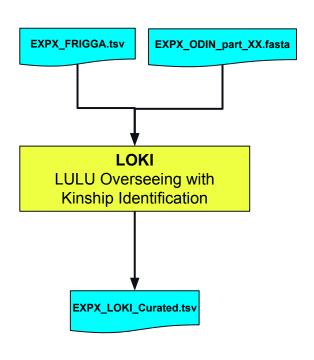
FRIGGA: Final Recount and Integration of Generated

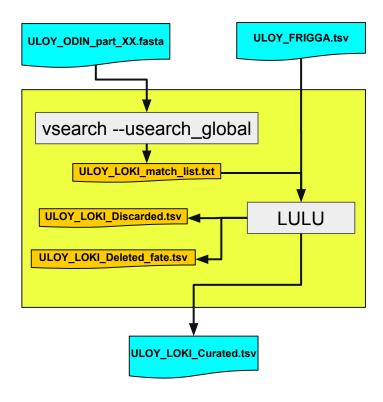
Genealogies and Abundances

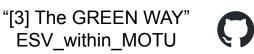




#### LOKI: LULU Overseeing with Kinship Identification

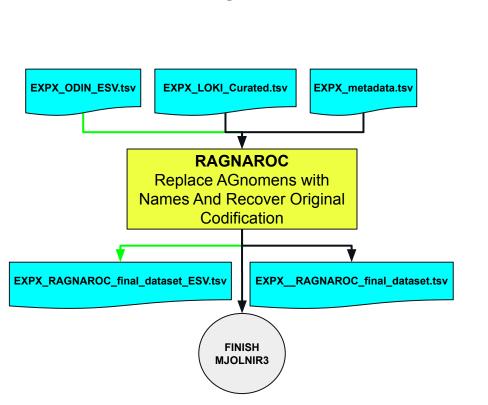


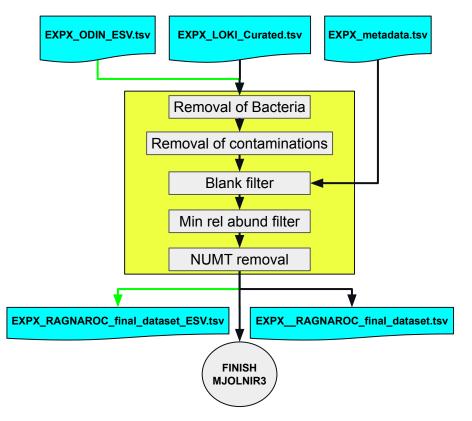




## RAGNAROC: Replace AGnomens with Names And

Recover Original Codification





**RAGNAROC:** Replace AGnomens with Names And Recover Original Codification

**EXPX LOKI Curated.tsv EXPX** metadata.tsv **RAGNAROC** Replace AGnomens with Names And Recover Original Codification EXPX\_\_RAGNAROC\_final\_dataset.tsv **FINISH MJOLNIR3** 

