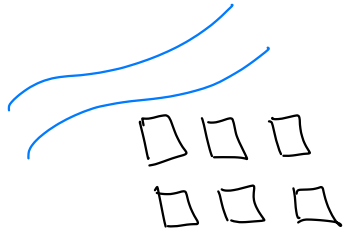


Sequencing of metagenome



6 samples from Man river



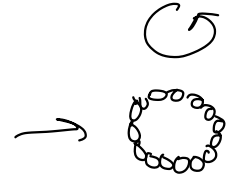
filter to remove prokaryotes



~~ATGAC~~

~~Met-Tet~~

remove external nucleic acid



centrifuge to purify

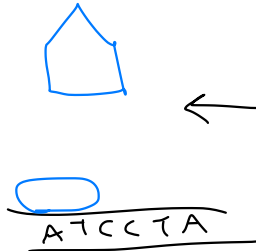


isolate viral DNA



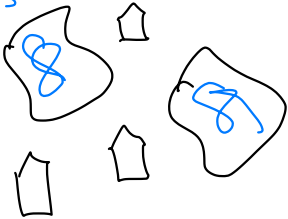
ATCG
TGCA
ATG

sequence



annotate

16S rRNA

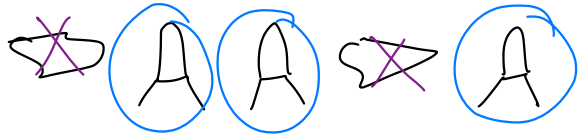


check for bacterial contamination using 16S rRNA



contig assembly

ABX Resistance Gene Search



identify viral genes



Met - STOP

identify ORF



ATCG

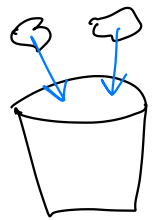
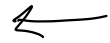
TAACCGT



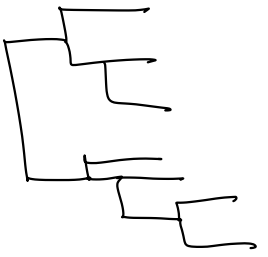
TATCGTA

AATCATCG

BLAST_p for ARG

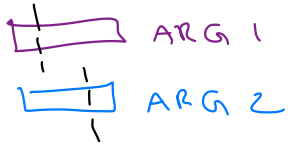


delete SNPs



make phylogenetic tree

Testing ARG Function



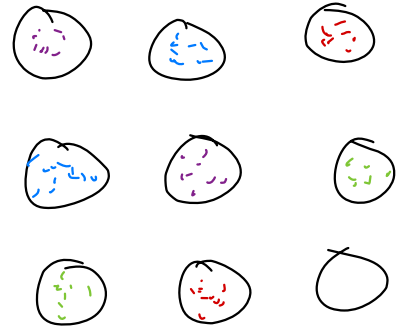
cut with
restriction
enzymes



make
recombinant
plasmid

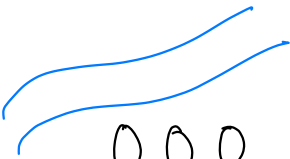


transform
into
E. coli



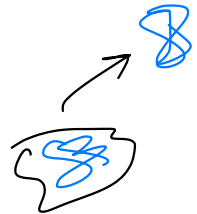
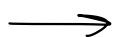
Mueller - Hinton
susceptibility
test

Bacterial metagenome


000
000
6 samples from
Han River



filter
biomass



extract
DNA



ATGCC
TAAGC
CTAAC
sequence



BLAST_p
search
against
ARGs