Broliden_5325

09 October, 2020

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#Load libraries and other scripts

#Defining some variables for the analysis

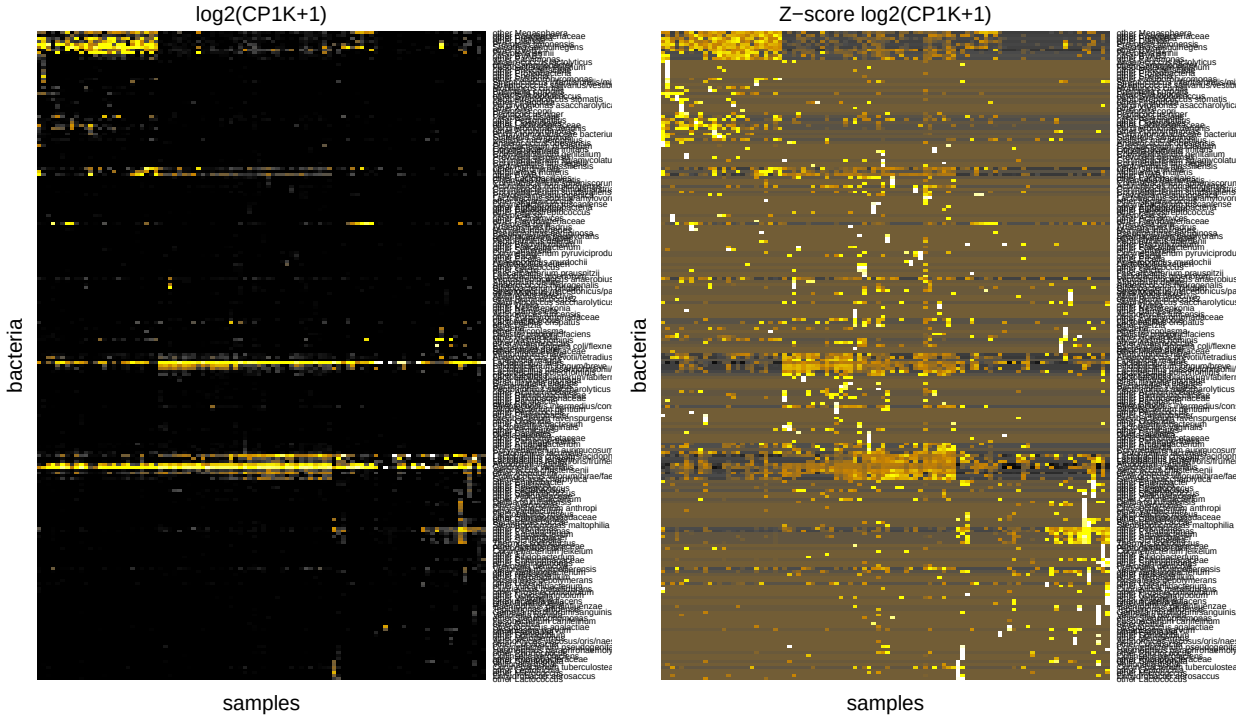
Loading data and metadata

```
## $ASV_tissue_V3_normalized_batch_corrected.csv
## [1] 767  96
##
## $ASV_CVL_V3_normalized_batch_corrected.csv
## [1] 767 111
##
## $ASV_CVL_V2_normalized_batch_corrected.csv
## [1] 767 111
```

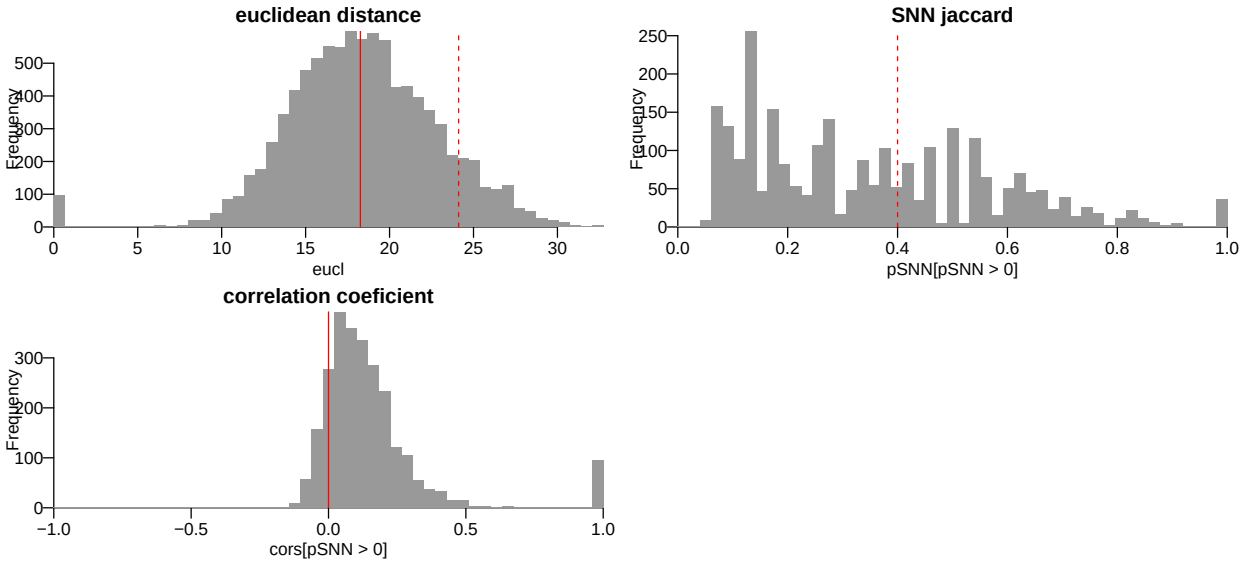
Merging microbiome datasets

Organise the datasets

Organise the datasets



Computing a SNN graph from sample correlations

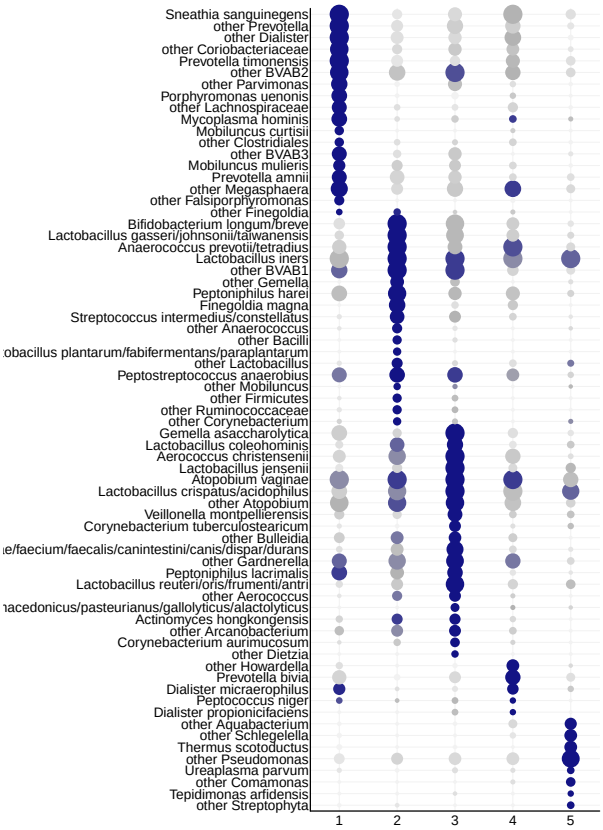


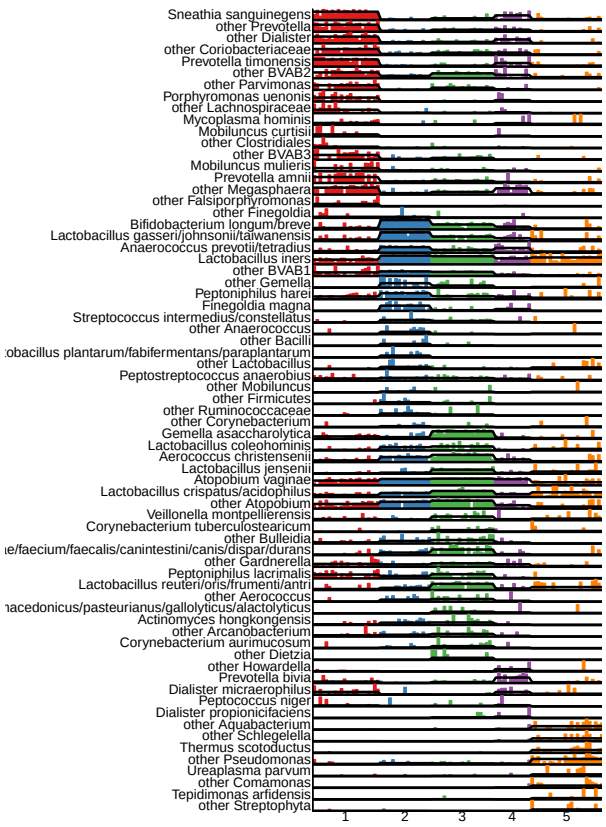
Visualise the data

Computing differential expression across clusters

```
## [1] 105   8
```

#Plotting the most significant bacteria across clusters


Sneathia sanguinegens
other Prevotella
other Dialister
other Coriobacteriaceae
Prevotella timonensis
other BVAB2
other Parvimonas
Porphyromonas uenonis
other Lachnospiraceae
Mycoplasma hominis
Mobiluncus curtisii
other Clostridiales
other BVAB3
Mobiluncus mulieris
Prevotella amnii
other Megasphaera
other Falsiporphyromonas
other Finegoldia
Bifidobacterium longum/breve
Lactobacillus gasseri/johnsonii/taiwanensis
Anaerococcus prevotii/tetradius
Lactobacillus iners
other BVAB1
other Gemella
Peptoniphilus harei
Finegoldia magna
Streptococcus intermedius/constellatus
other Anaerococcus
other Bacilli
obacillus plantarum/fabifermentans/paraplantarum
other Lactobacillus
Peptostreptococcus anaerobius
other Mobiluncus
other Firmicutes
other Ruminococcaceae
other Corynebacterium
Gemella asaccharolytica
Lactobacillus coleohominis
Aerococcus christensenii
Lactobacillus jensenii
Atopobium vaginae
Lactobacillus crispatus/acidophilus
other Atopobium
Veillonella montpellierensis
Corynebacterium tuberculostearicum
other Bulleidia
e/faecium/faecalis/canintestini/canis/dispar/durans
other Gardnerella
Peptoniphilus lacrimalis
Lactobacillus reuteri/oris/frumenti/antri
other Aerococcus
acedonicus/pasteurianus/gallolyticus/alactolyticus
Actinomyces hongkongensis
other Arcanobacterium
Corynebacterium aurimucosum
other Dietzia
other Howardella
Prevotella bivia
Dialister micraerophilus
Peptococcus niger
Dialister propionicifaciens
other Aquabacterium
other Schlegelella
Thermus scotoductus
other Pseudomonas
Ureaplasma parvum
other Comamonas
Tepidimonas arfidensis
other Streptophyta
1
2
3
4
5


Sneathia sanguinegens
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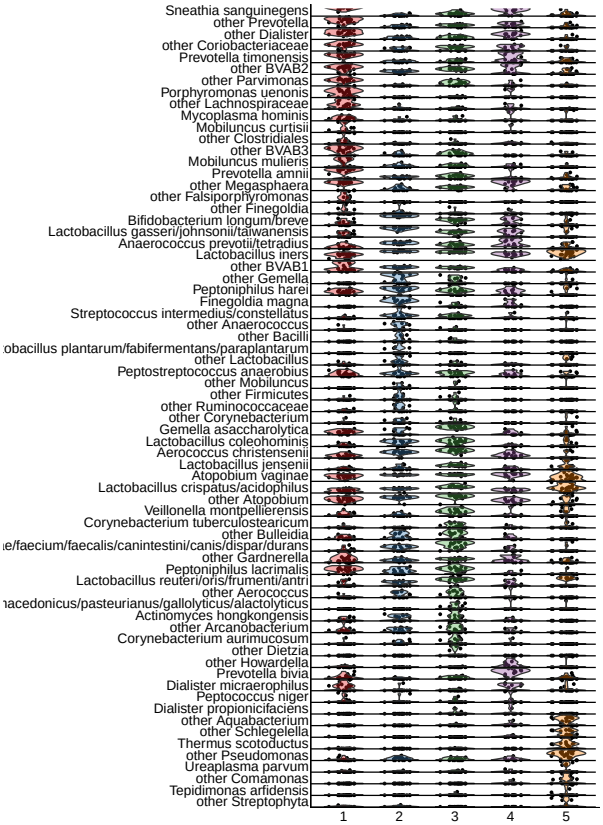
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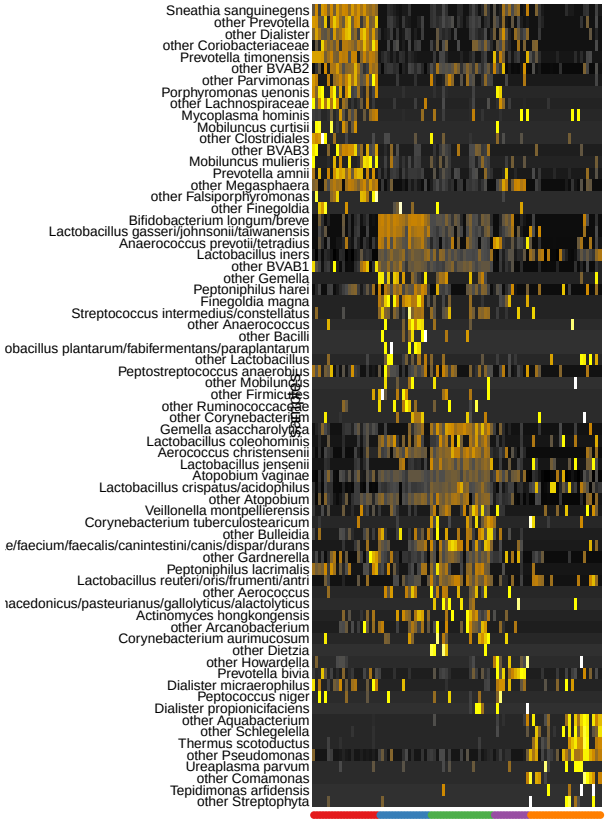
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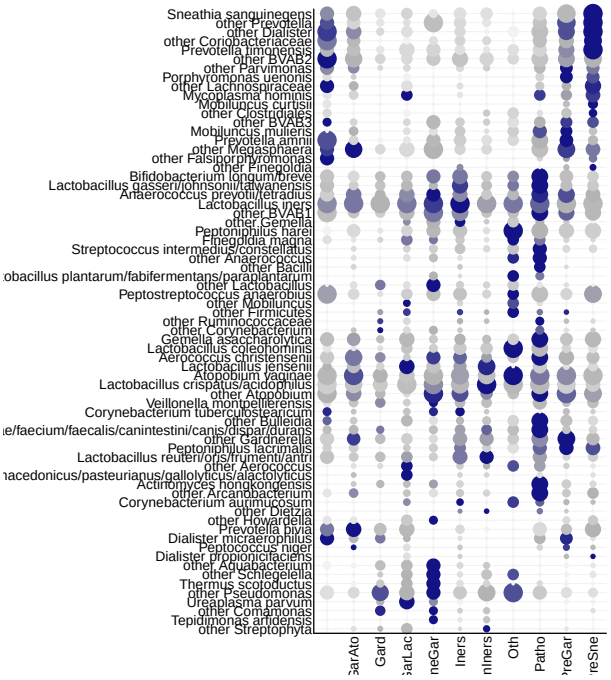
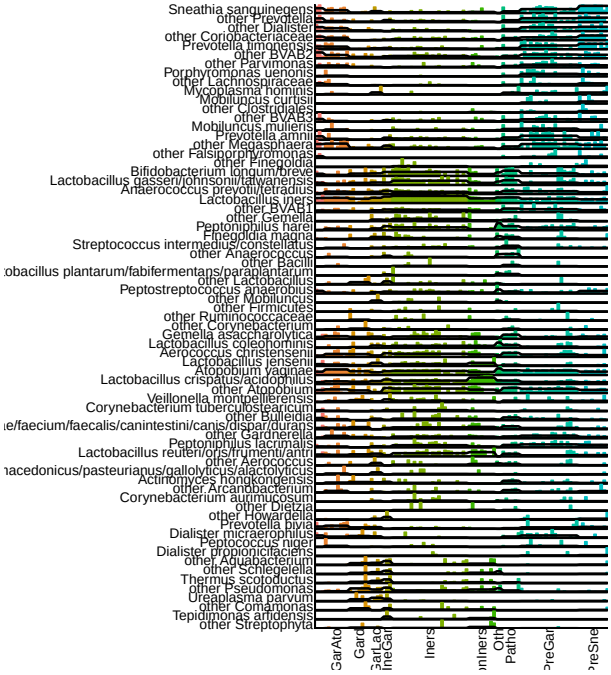
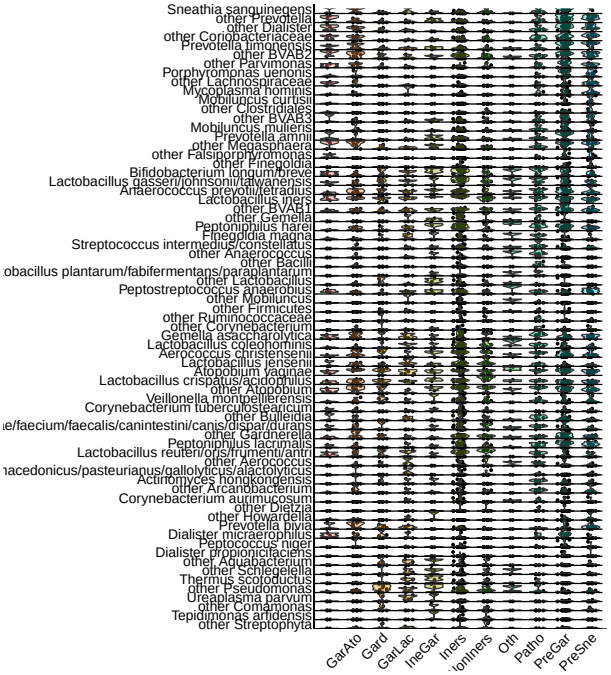
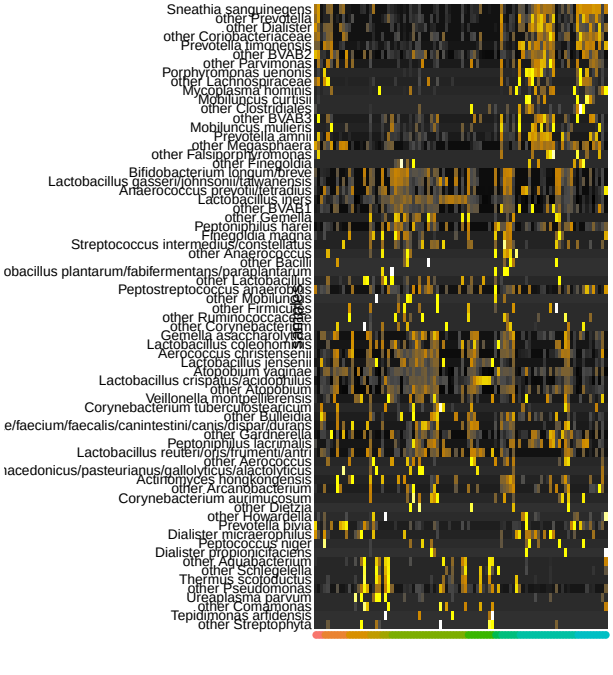
other Pseudomonas
Ureaplasma parvum
other Comamonas
Tepidimonas arfidensis
other Streptophyta

#Plotting the most significant bacteria across PREVIOUS ANNOTATION

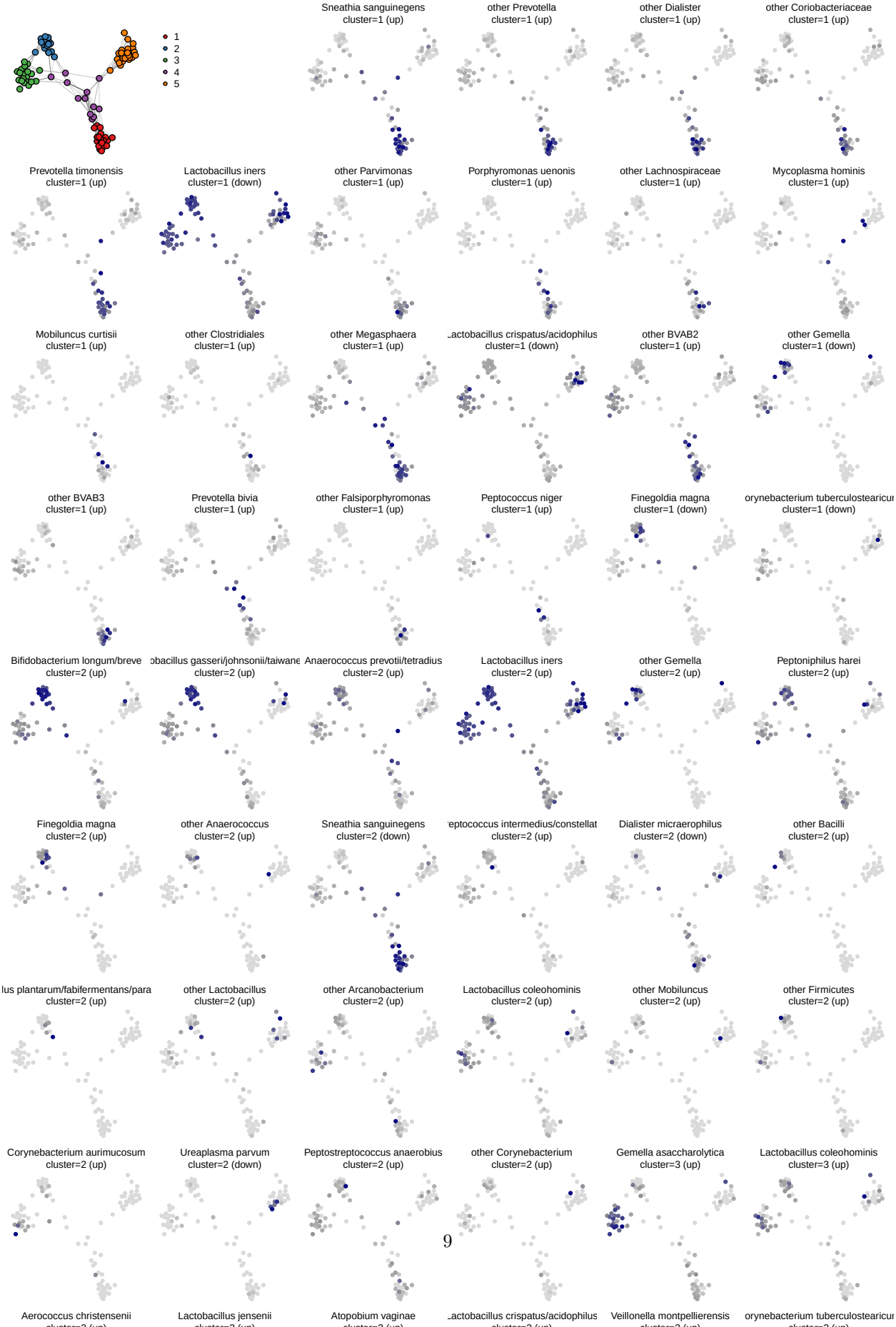


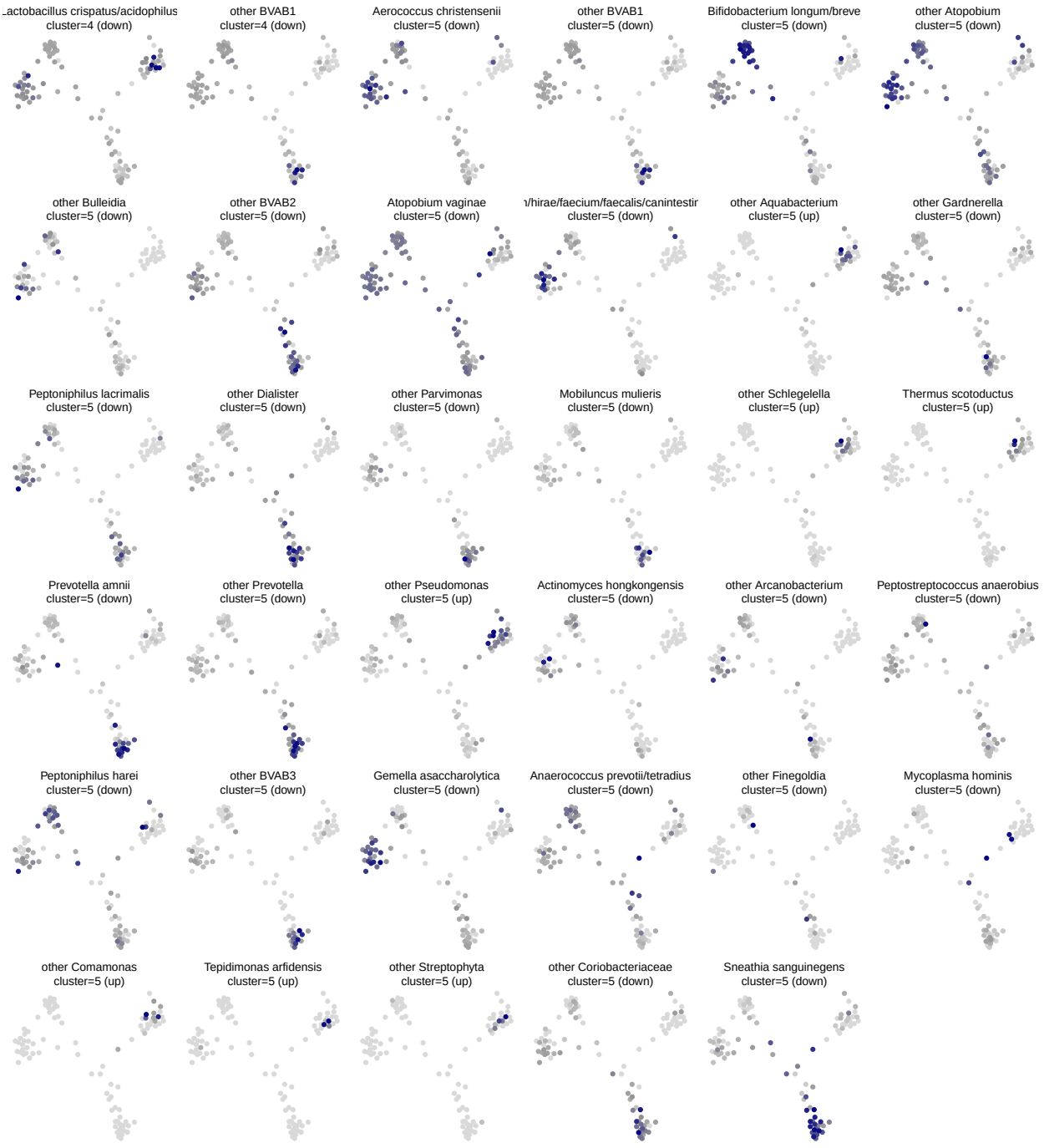




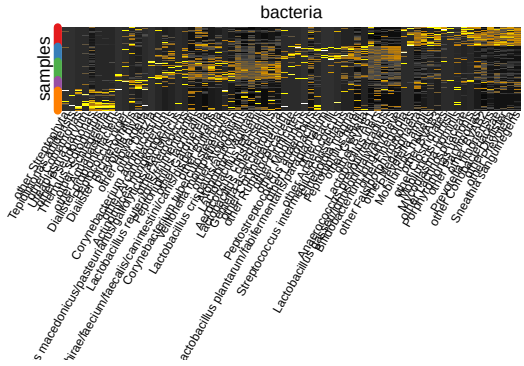


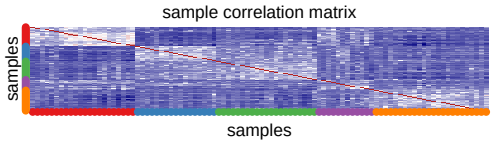
Plotting the most significant bacteria across clusters




_actobacillus crispatus/acidophilus
cluster=4 (down)
other BVAB1
cluster=4 (down)
Aerococcus christensenii
cluster=5 (down)
other BVAB1
cluster=5 (down)
Bifidobacterium longum/breve
cluster=5 (down)
other Atopobium
cluster=5 (down)
other Bulleidia
cluster=5 (down)
other BVAB2
cluster=5 (down)
Atopobium vaginae
cluster=5 (down)
ı/hirae/faecium/faecalis/canintestir
cluster=5 (down)
other Aquabacterium
cluster=5 (up)
other Gardnerella
cluster=5 (down)
Peptoniphilus lacrimalis
cluster=5 (down)
other Dialister
cluster=5 (down)
other Parvimonas
cluster=5 (down)
Mobiluncus mulieris
cluster=5 (down)
other Schlegelella
cluster=5 (up)
Thermus scotoductus
cluster=5 (up)
Prevotella amnii
cluster=5 (down)
other Prevotella
cluster=5 (down)
other Pseudomonas
cluster=5 (up)
Actinomyces hongkongensis
cluster=5 (down)
other Arcanobacterium
cluster=5 (down)
Peptostreptococcus anaerobius
cluster=5 (down)
Peptoniphilus harei
cluster=5 (down)
other BVAB3
cluster=5 (down)
Gemella asaccharolytica
cluster=5 (down)
Anaerococcus prevotii/tetradius
cluster=5 (down)
other Finegoldia
cluster=5 (down)
Mycoplasma hominis
cluster=5 (down)
other Comamonas
cluster=5 (up)
Tepidimonas arfidensis
cluster=5 (up)
other Streptophyta
cluster=5 (up)
other Coriobacteriaceae
cluster=5 (down)
Sneathia sanguinegens
cluster=5 (down)

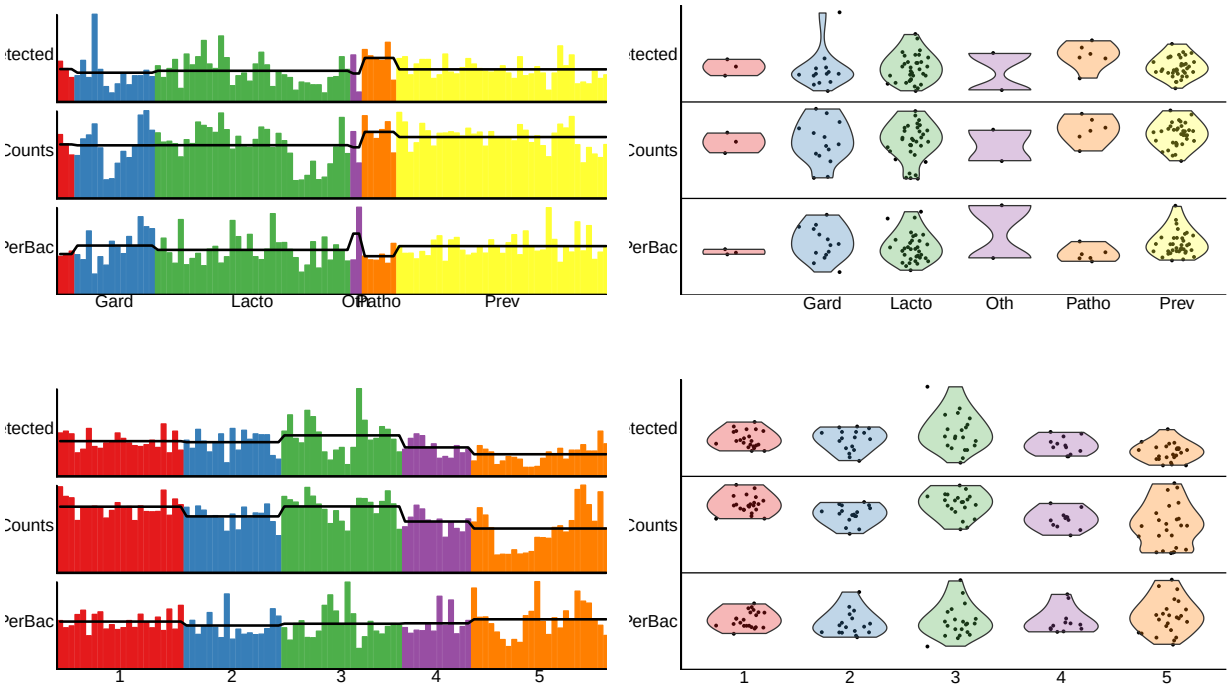
#Plotting bacteria across clusters






```
## [1] -0.01536842
```

#Plotting bacteria across clusters




```
##    .2
## .1     Gard Lacto Oth Patho Prev
##   1  1    0     0   0     1   20
##   2  0    2     9   1     3    2
##   3  1    2    12   0     1    5
##   4  1    1     0   0     0   10
##   5  0    9    13   1     1    0
```

#Plotting bacteria across clusters

#Dataset integration