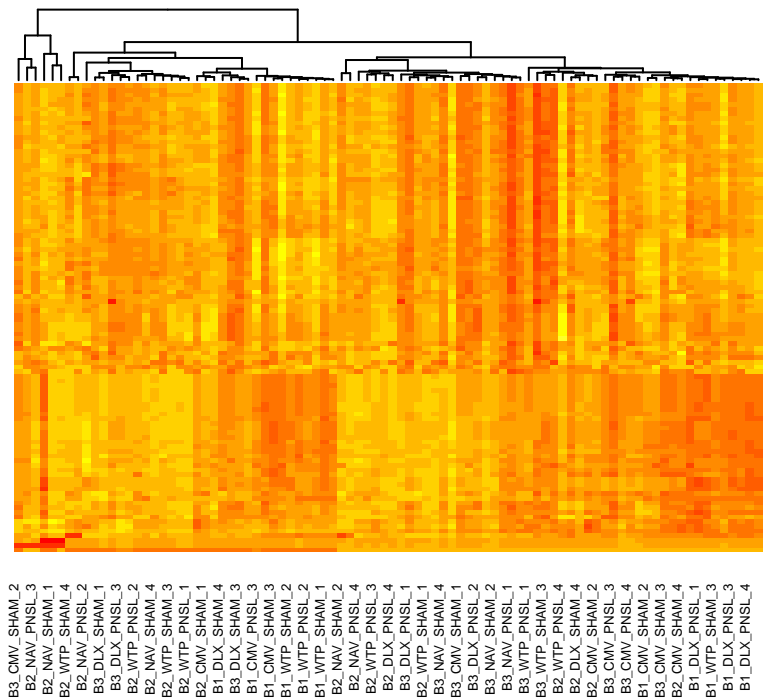# Differential expresion and GO terms analysis with HiSat2
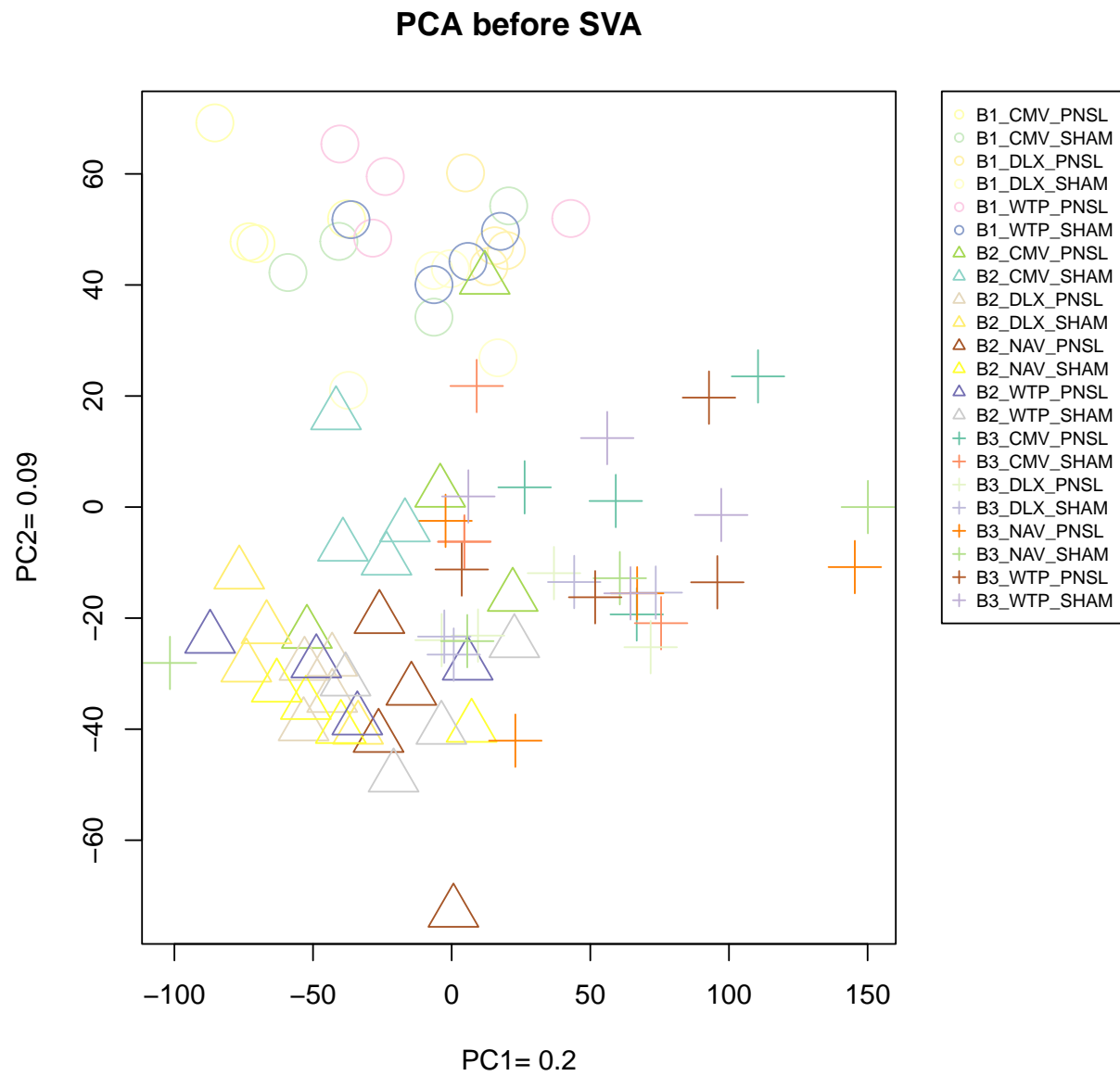
Section 1 - Limma

Heatmap raw data
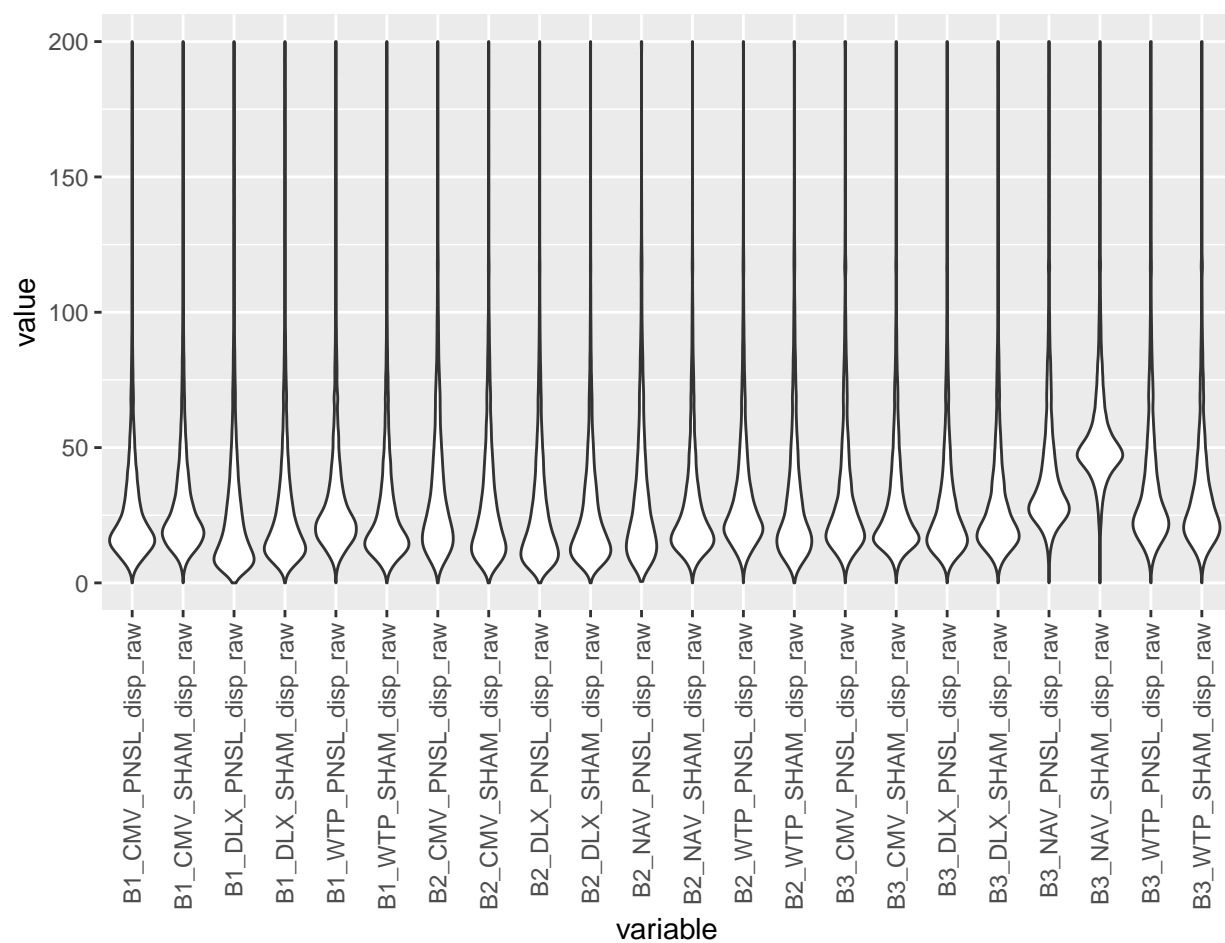

atmap for 100 most varible samples
raw data

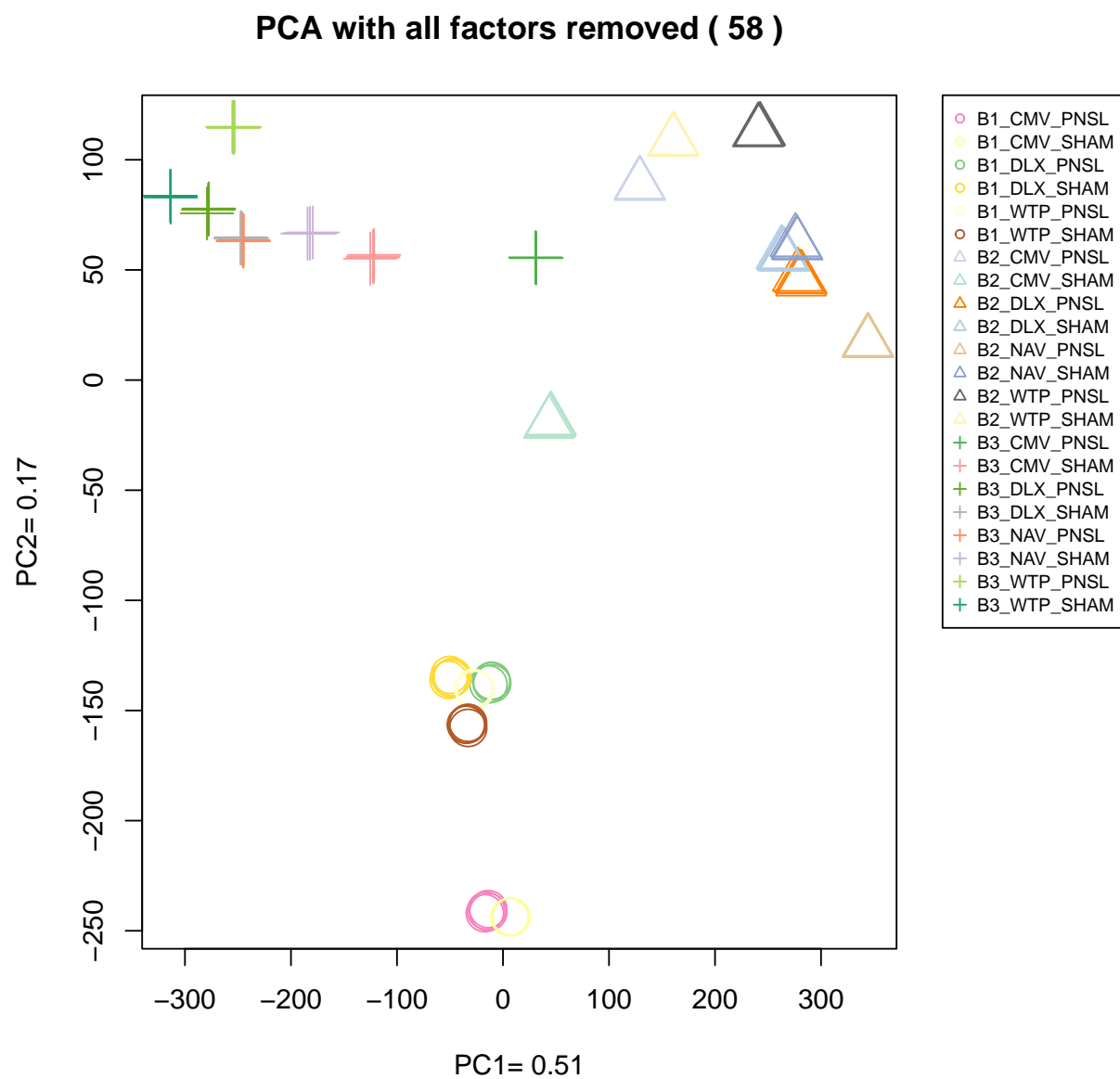# PCA raw data

PCA before SVA

PC1= 0.2

PC2= 0.09

Legend:
- B1_CMV_PNSL
- B1_CMV_SHAM
- B1_DLX_PNSL
- B1_DLX_SHAM
- B1_WTP_PNSL
- B1_WTP_SHAM
- B2_CMV_PNSL
- B2_CMV_SHAM
- B2_DLX_PNSL
- B2_DLX_SHAM
- B2_NAV_PNSL
- B2_NAV_SHAM
- B2_WTP_PNSL
- B2_WTP_SHAM
- B3_CMV_PNSL
- B3_CMV_SHAM
- B3_DLX_PNSL
- B3_DLX_SHAM
- B3_NAV_PNSL
- B3_NAV_SHAM
- B3_WTP_PNSL
- B3_WTP_SHAM
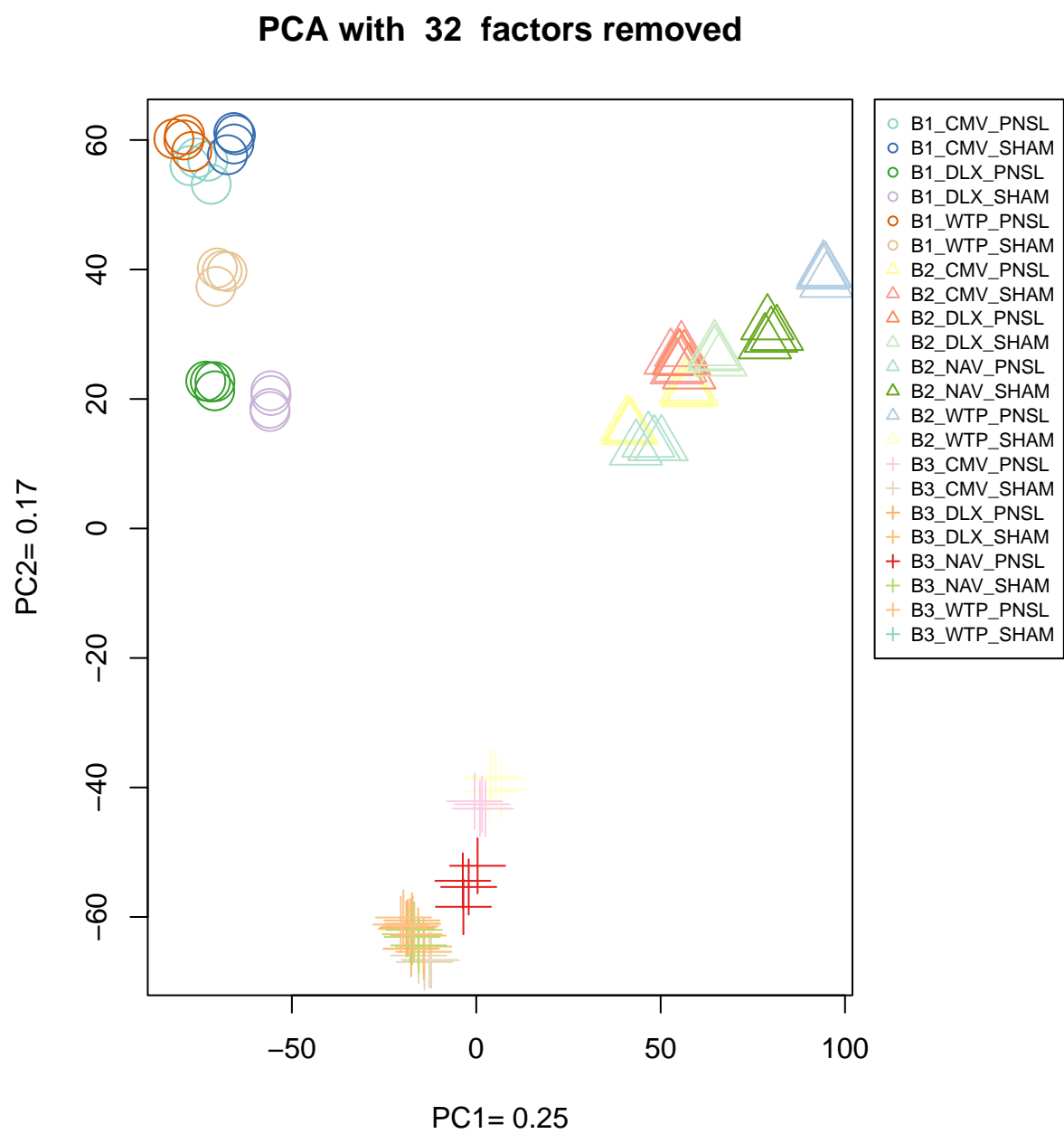
Violinplot raw data

PCA with all factors removed (58)

Final PCA with 32 factors removed

PCA with 32 factors removed

**Number of differentially expressed genes with adjusted p-value <
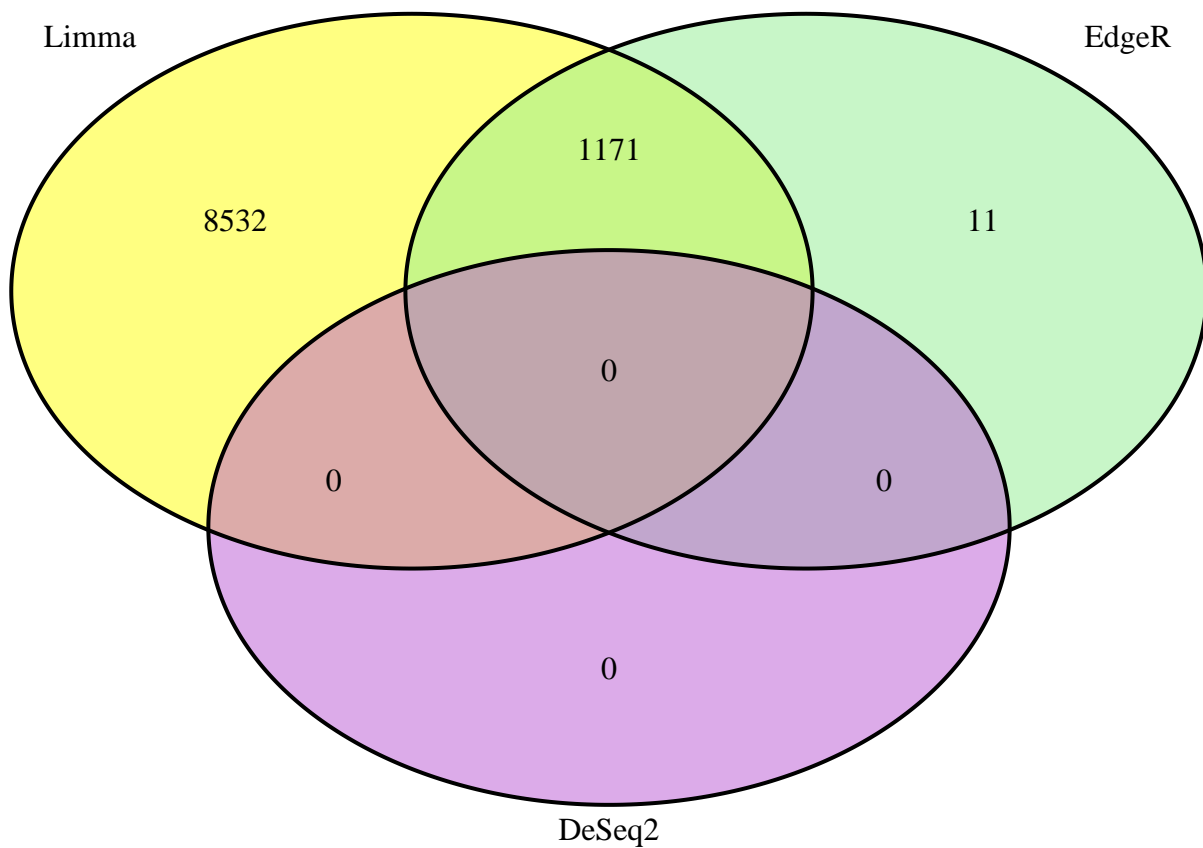0.05: 9703**

Section 2 -EdgeR

**Number of differentially expressed genes with adjusted p-value <
0.05: 1182**

Section 3 -DeSeq

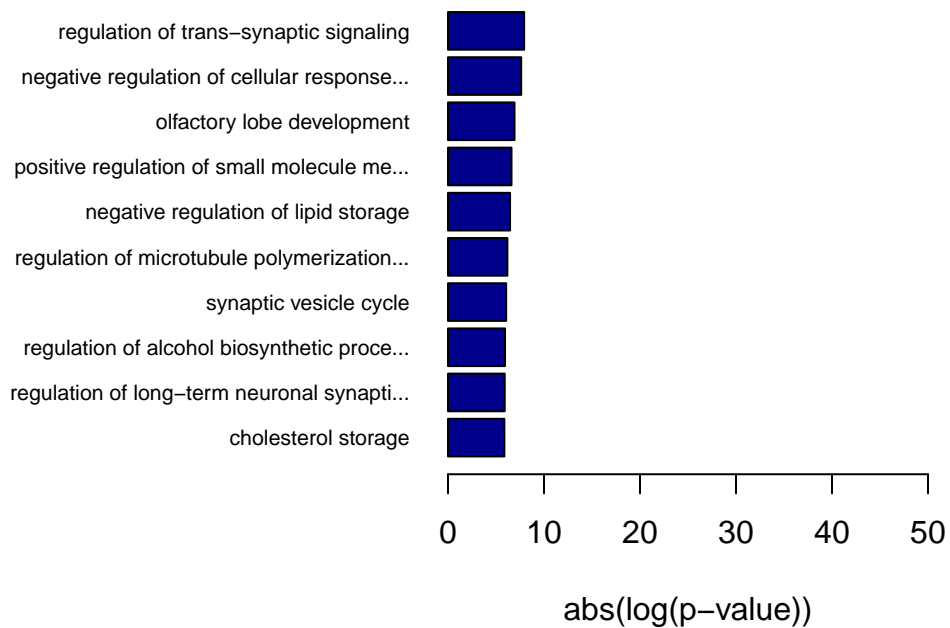**Number of differentially expressed genes with adjusted p-value <
0.05: 0**

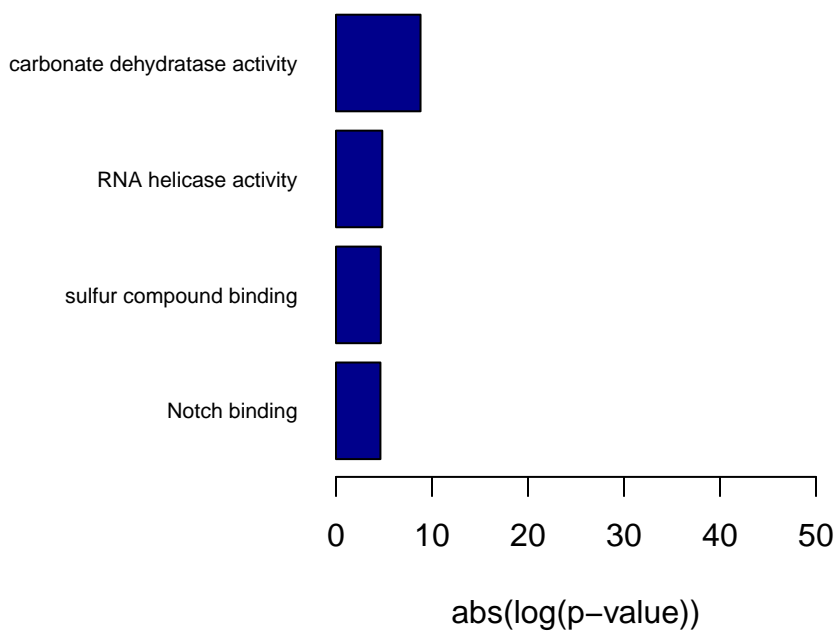**Ven diagram for all three methods**

```
## NULL
```

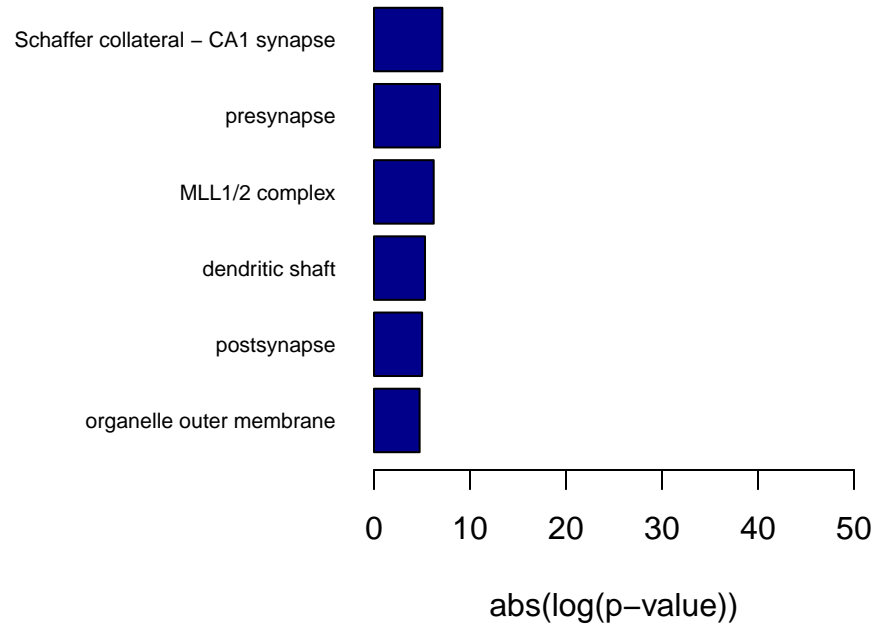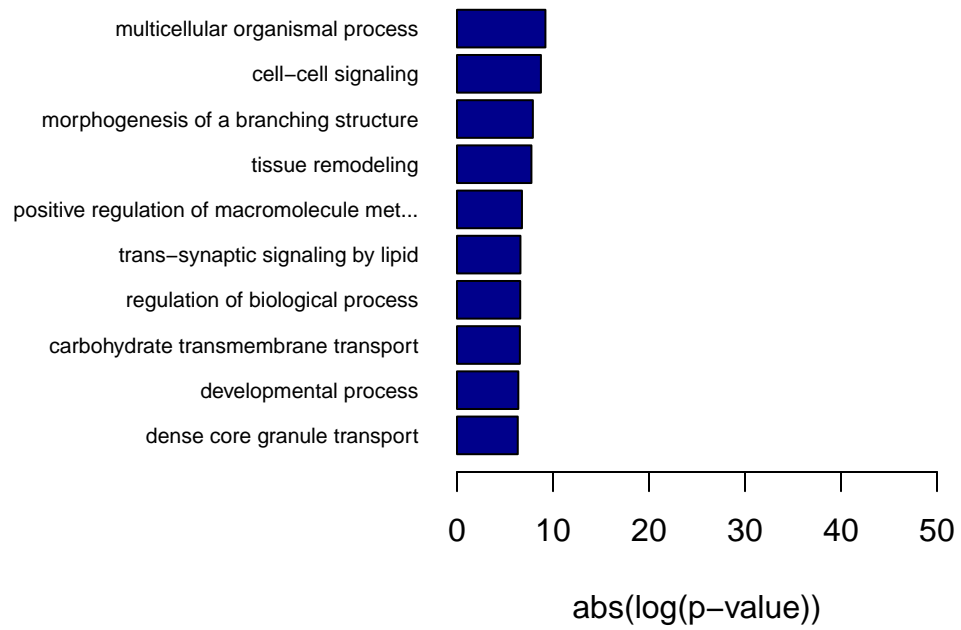# Barplots for top 10 terms for given GO term
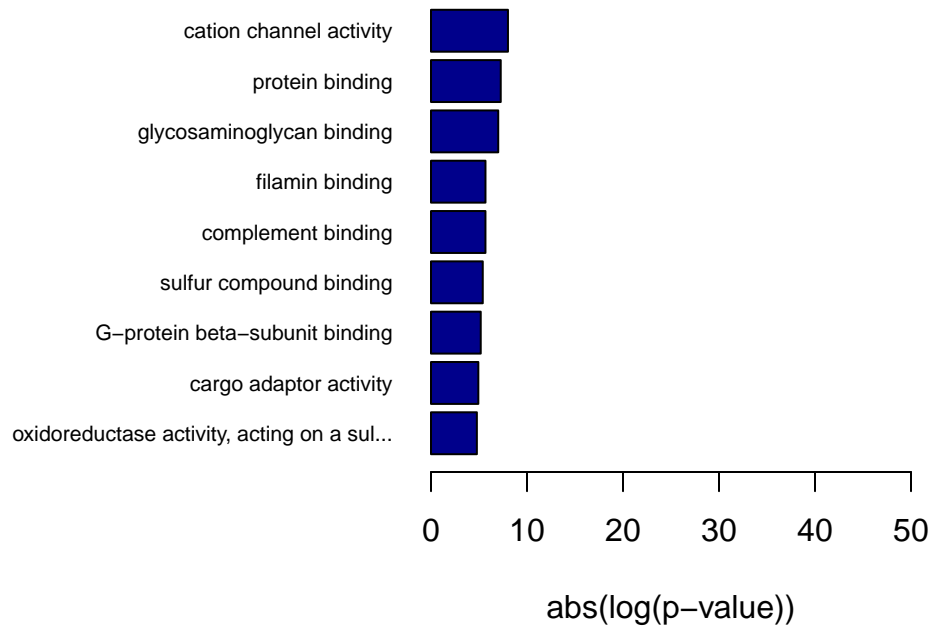
Top 10 BP for limma
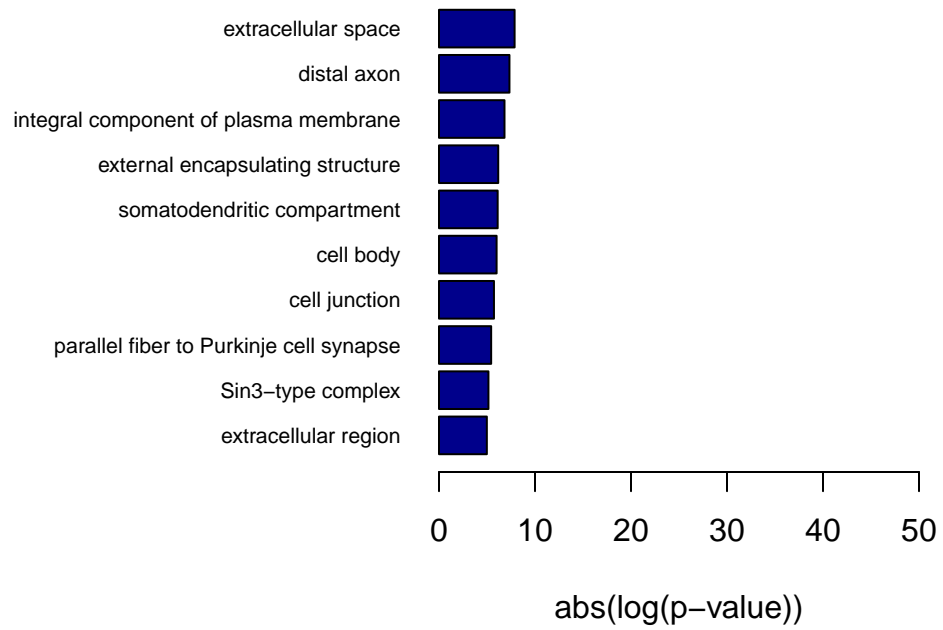

Top 4 MF for limma
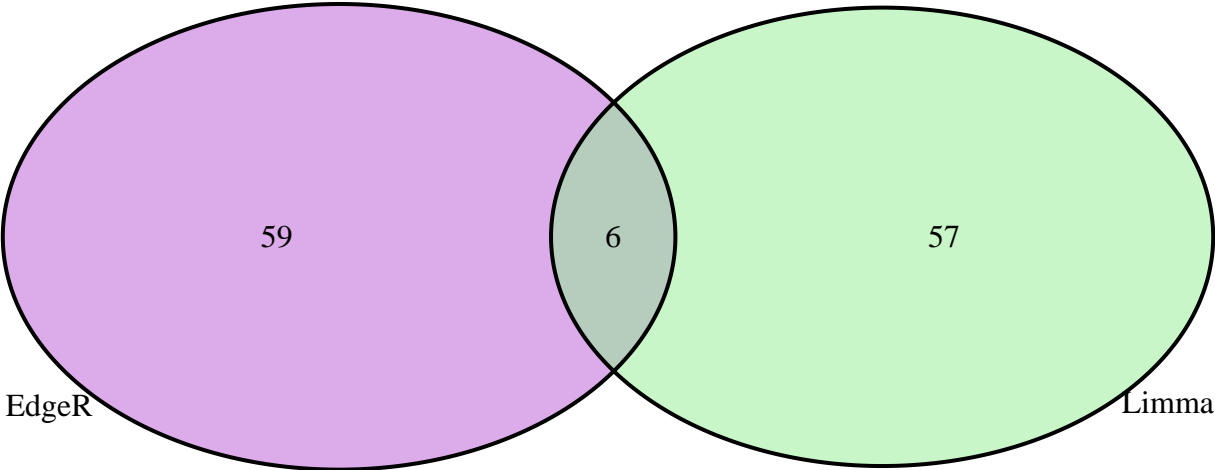
Top 6 CC for limma

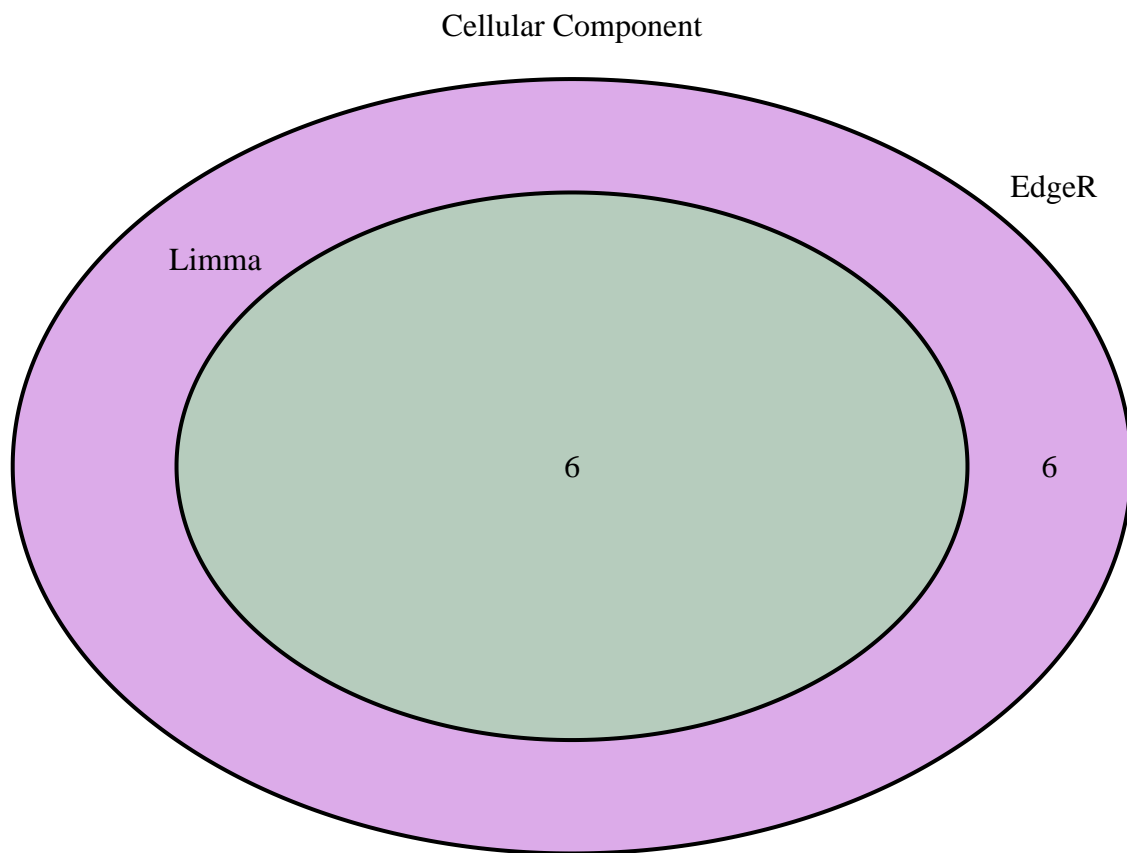**Top 10 BP for edgeR**

Top 9 MF for edgeR

cation channel activity

protein binding

glycosaminoglycan binding

filamin binding

complement binding

sulfur compound binding

G−protein beta−subunit binding

cargo adaptor activity

oxidoreductase activity, acting on a sul...

0   10   20   30   40   50

abs(log(p−value))

Top 10 CC for edgeR

abs(log(p−value))

Biological Process

Cellular Component

Limma

EdgeR

6

6

Molecular FUnction

Limma

EdgeR

4

5

14