**Supplementary File 1.** data normalization and clustering result.



The box plot for normalization of GSE89632
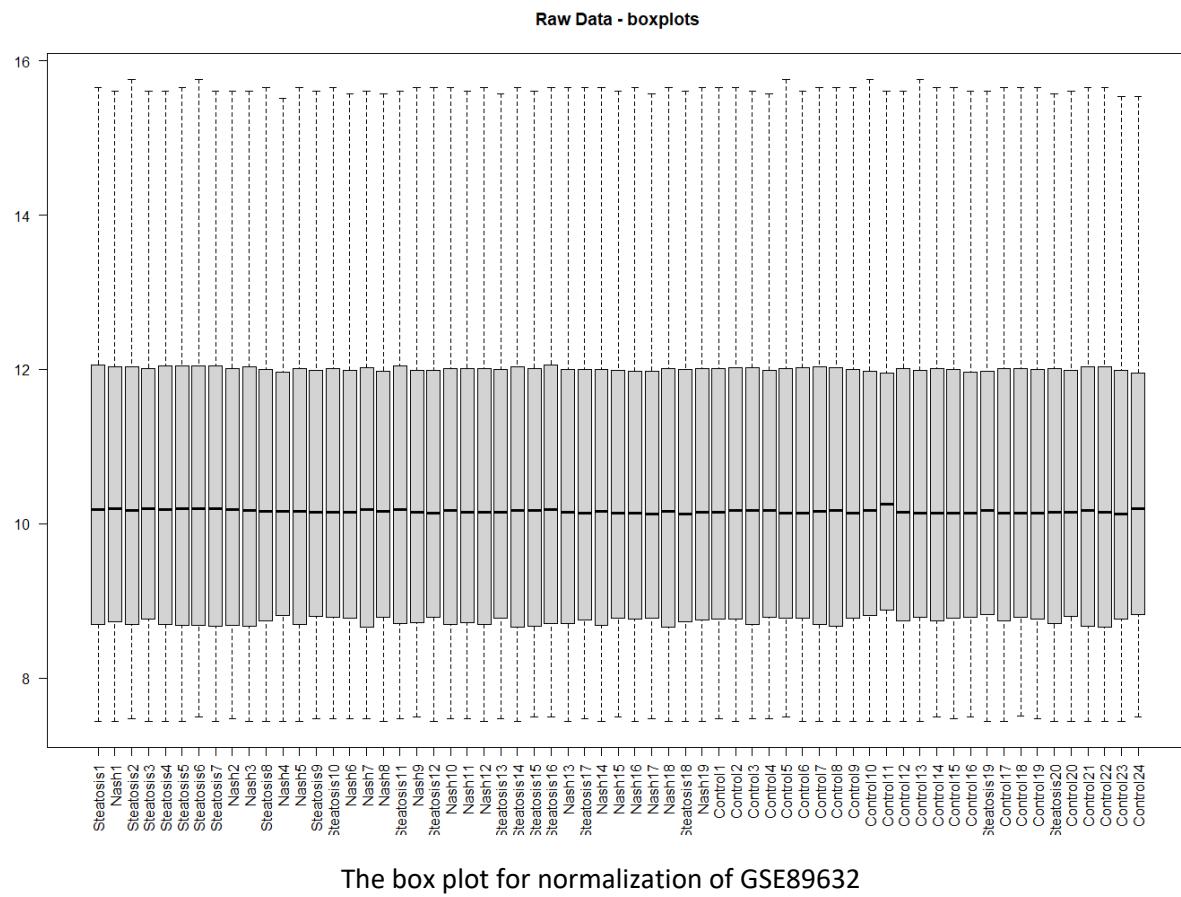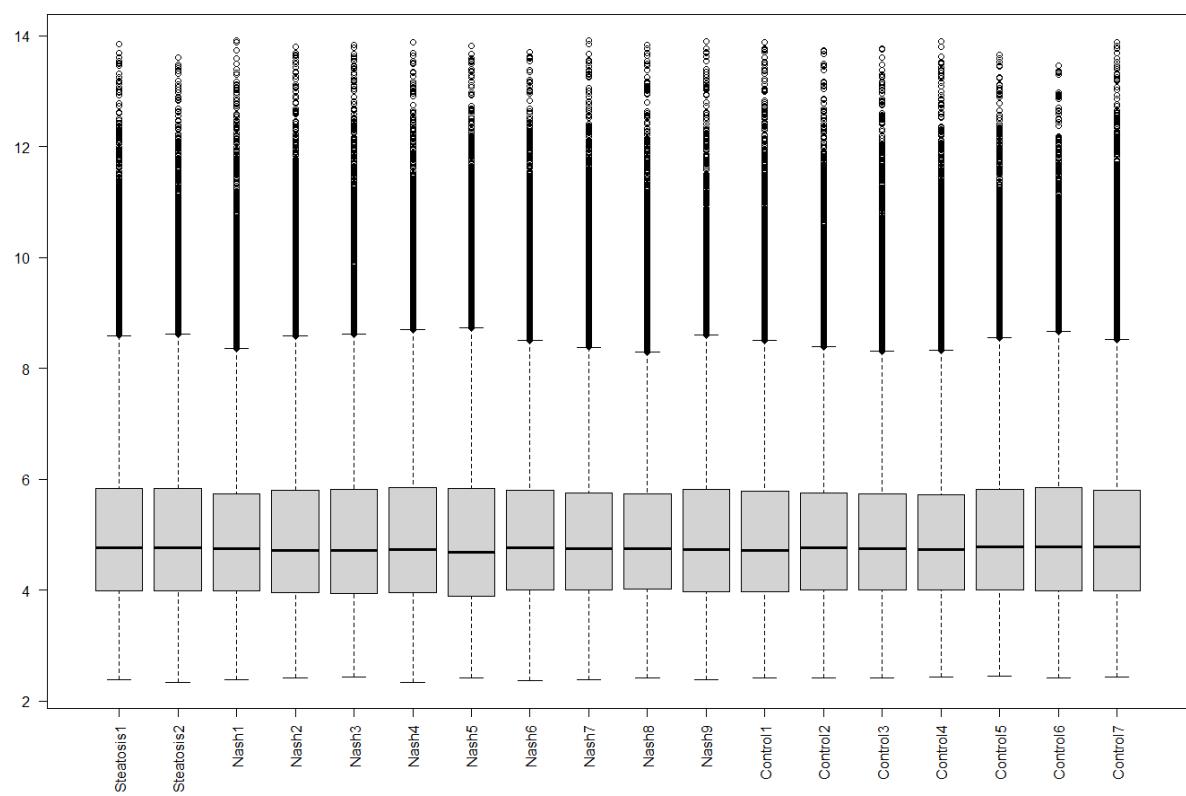
**Raw Data - boxplots**



The box plot for normalization of GSE63067

**Raw Data - boxplots**
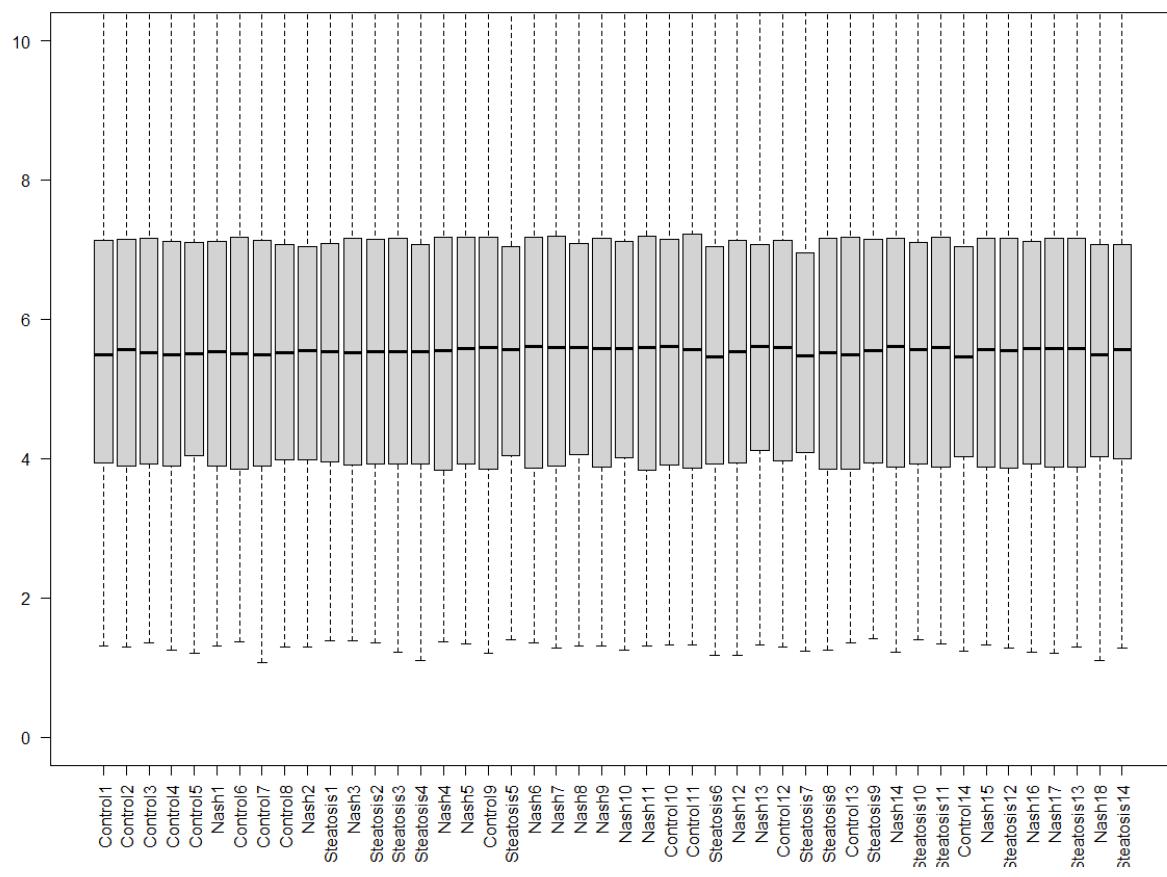
The box plot for normalization of GSE48452

**Hierarchical Clustering**



as.dist(1 - cor(final_data))
hclust (*, "complete")

The Hierarchical Clustering of GSE89632

**Hierarchical Clustering**

Height

as.dist(1 - cor(final_data))
hclust (*, "complete")

The Hierarchical Clustering of GSE63067

**Hierarchical Clustering**



as.dist(1 - cor(final_data))
hclust (*, "complete")
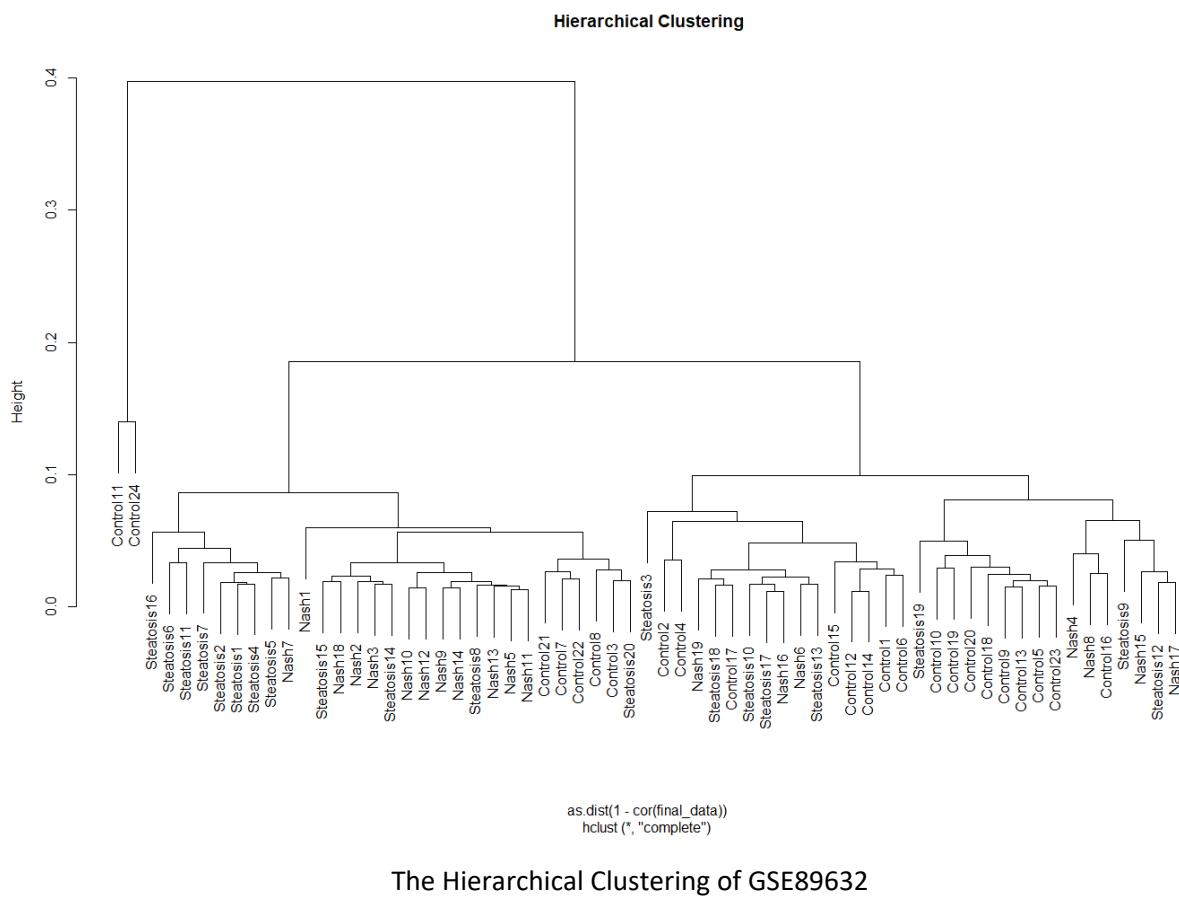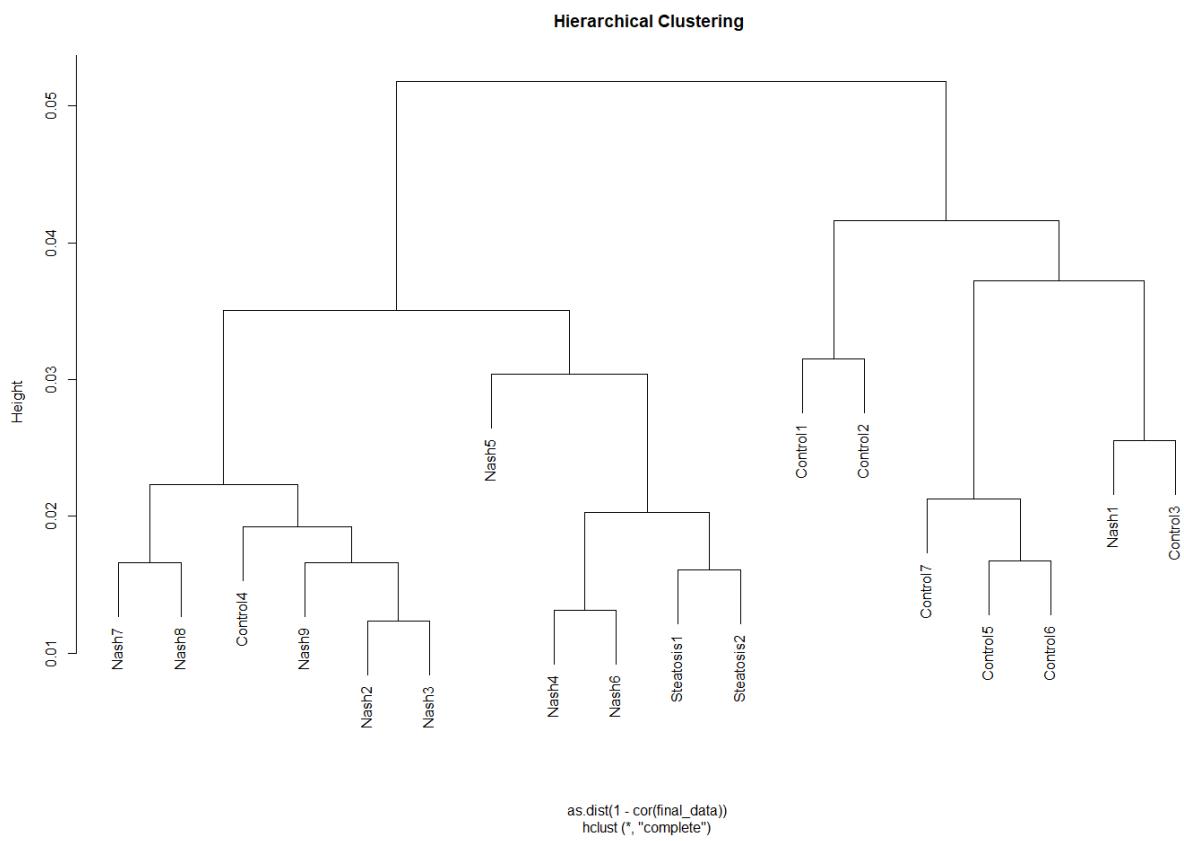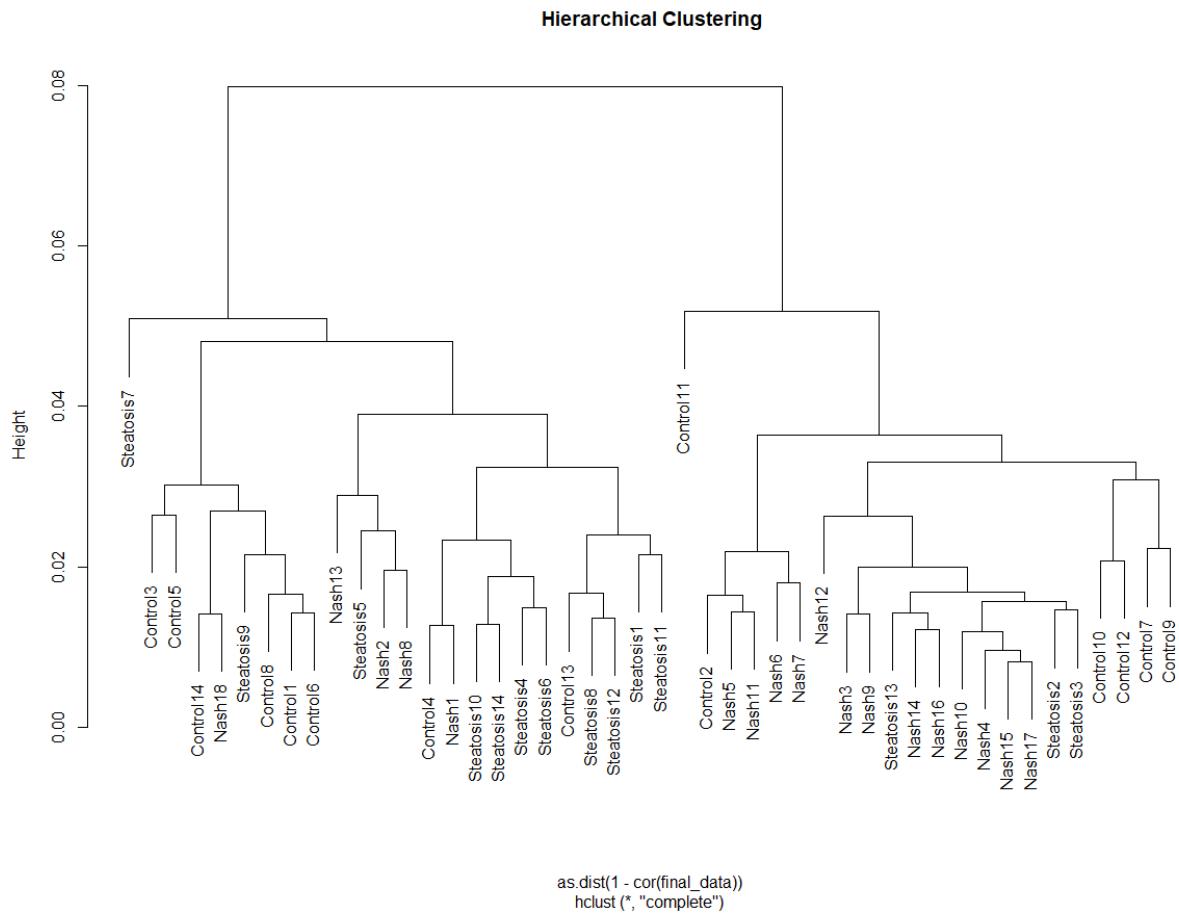
The Hierarchical Clustering of GSE48452
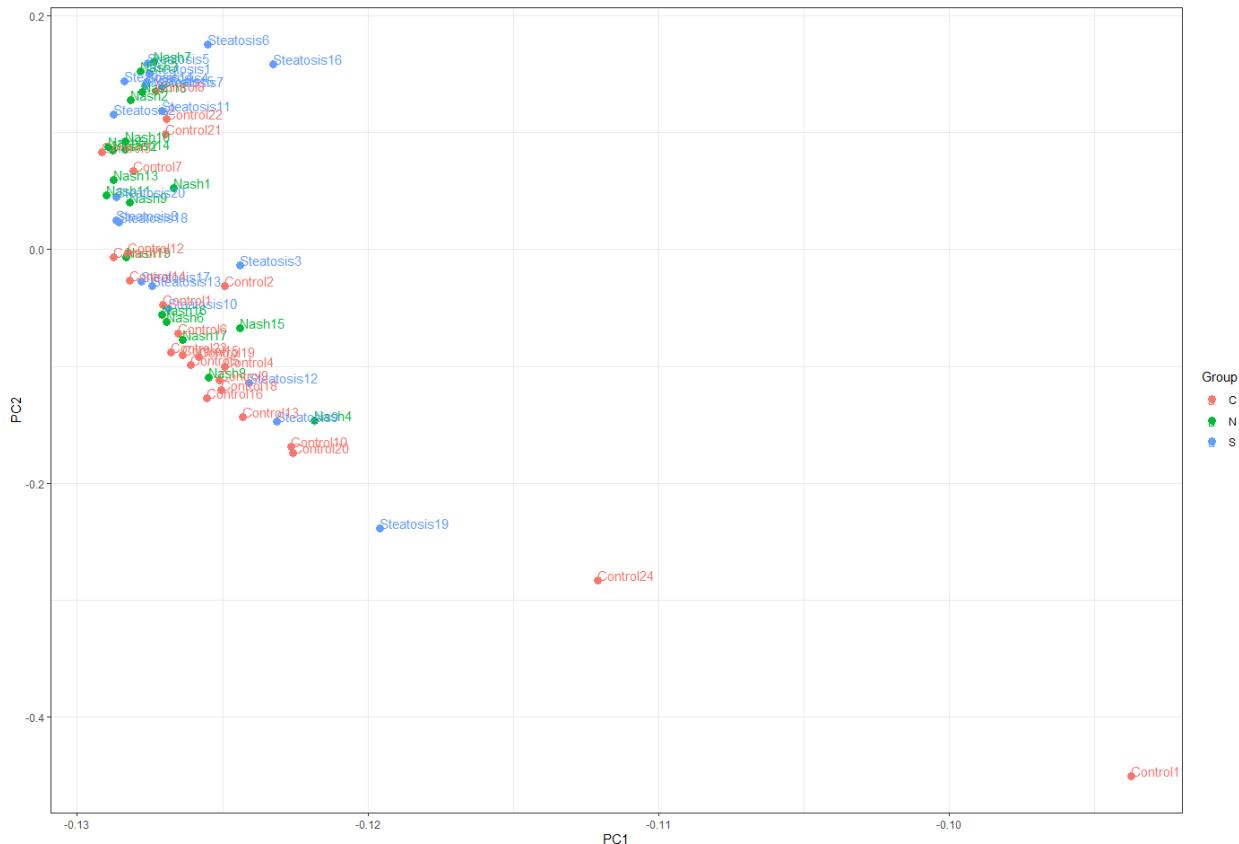
The PCA of GSE89632
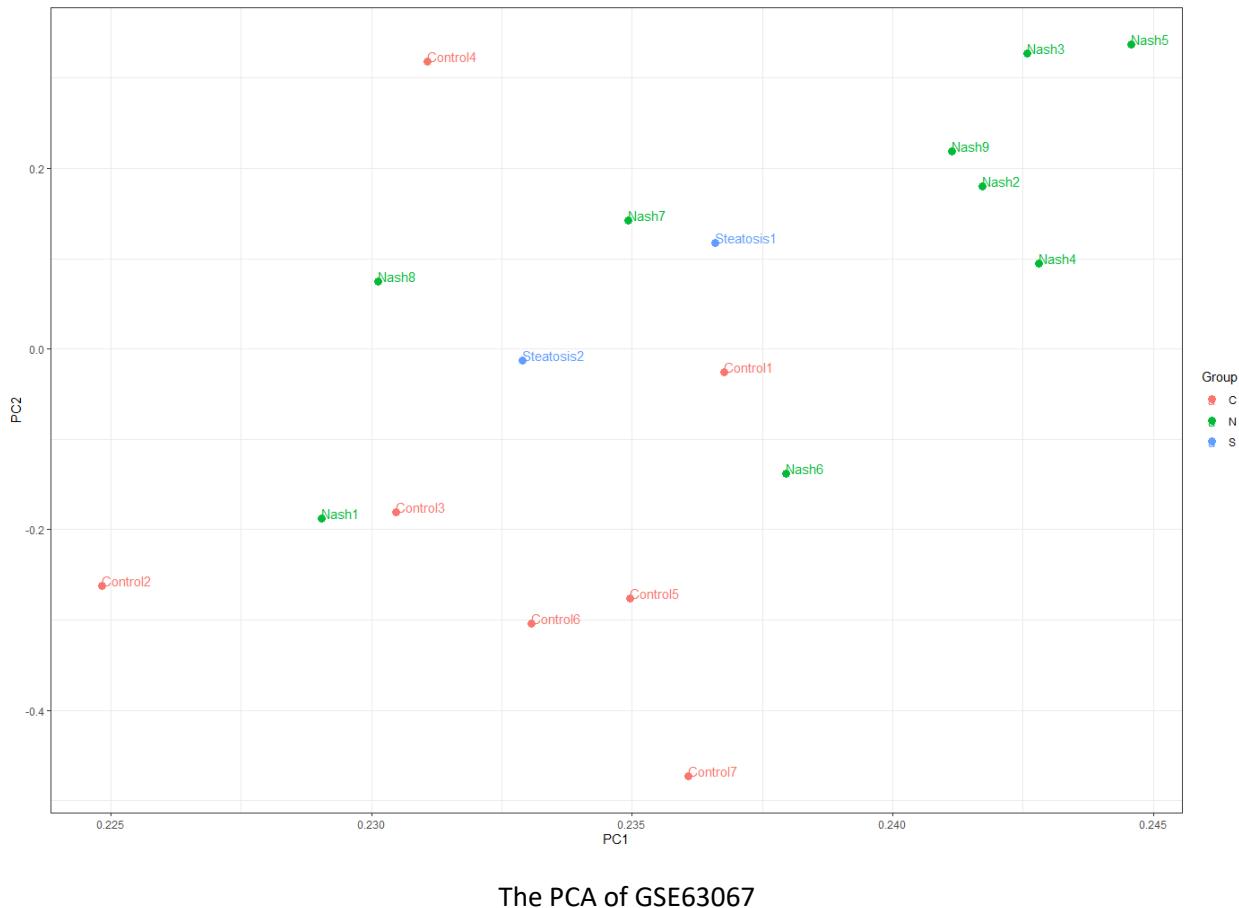
The PCA of GSE63067

The PCA of GSE48452