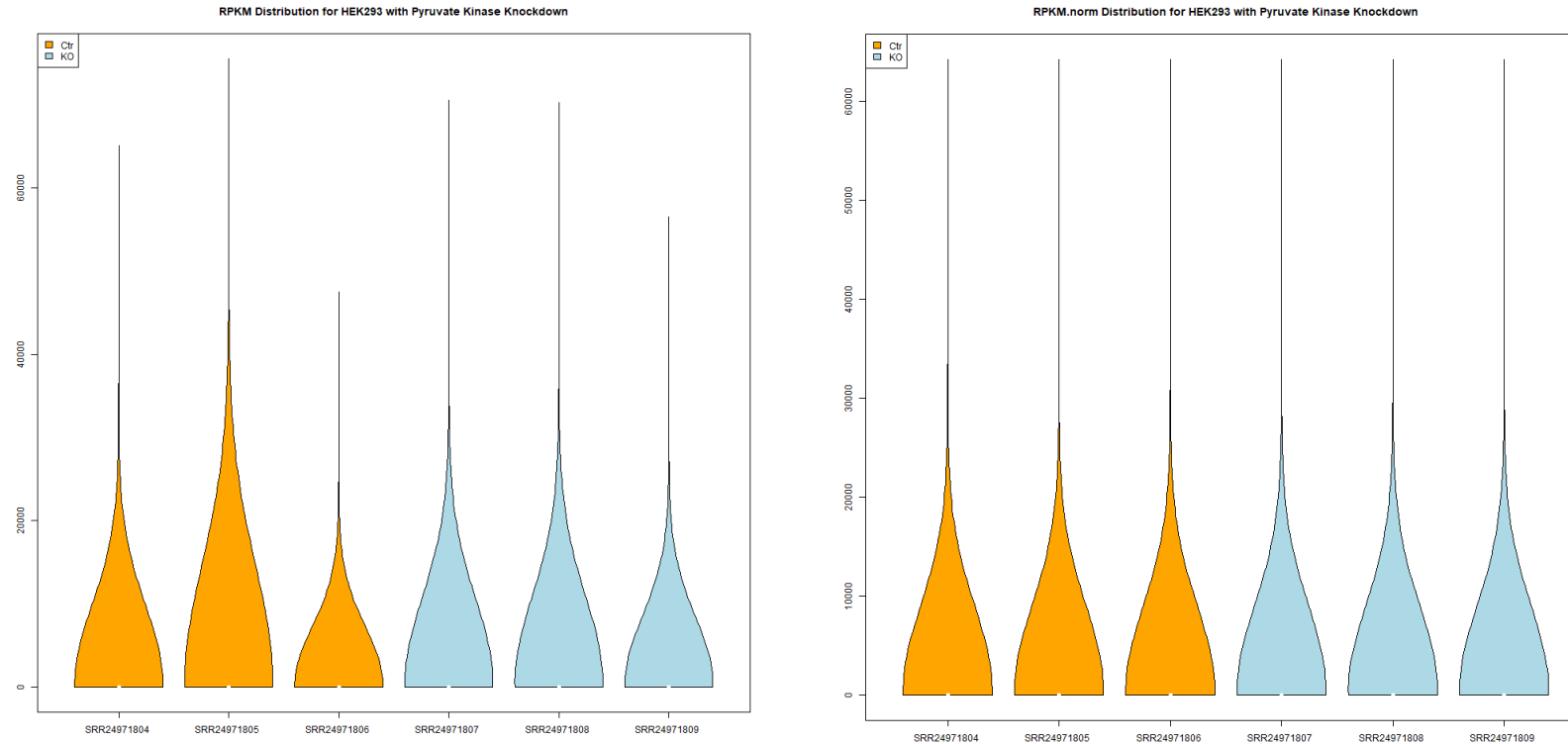# RNA-seq data analysis for HEK293 cells with knockdown of pyruvate kinase

Jianxun Wang

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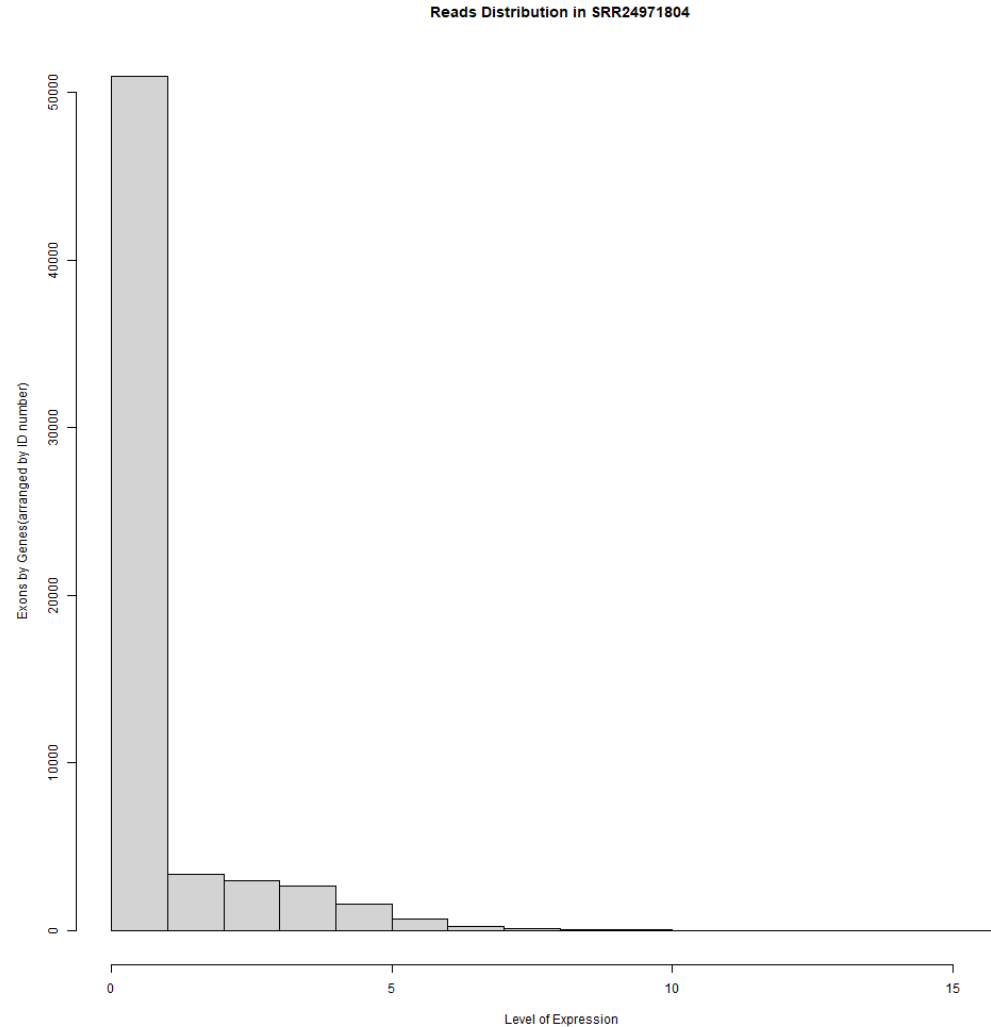# Violin plot of RPKM showing RNA Seq reads is not in normal distribution

RPKM Distribution for HEK293 with Pyruvate Kinase Knockdown

RPKM.norm Distribution for HEK293 with Pyruvate Kinase Knockdown

The T test is not fitted for this RNA Seq data

Histogram confirms that the reads distribution is not normally distributed

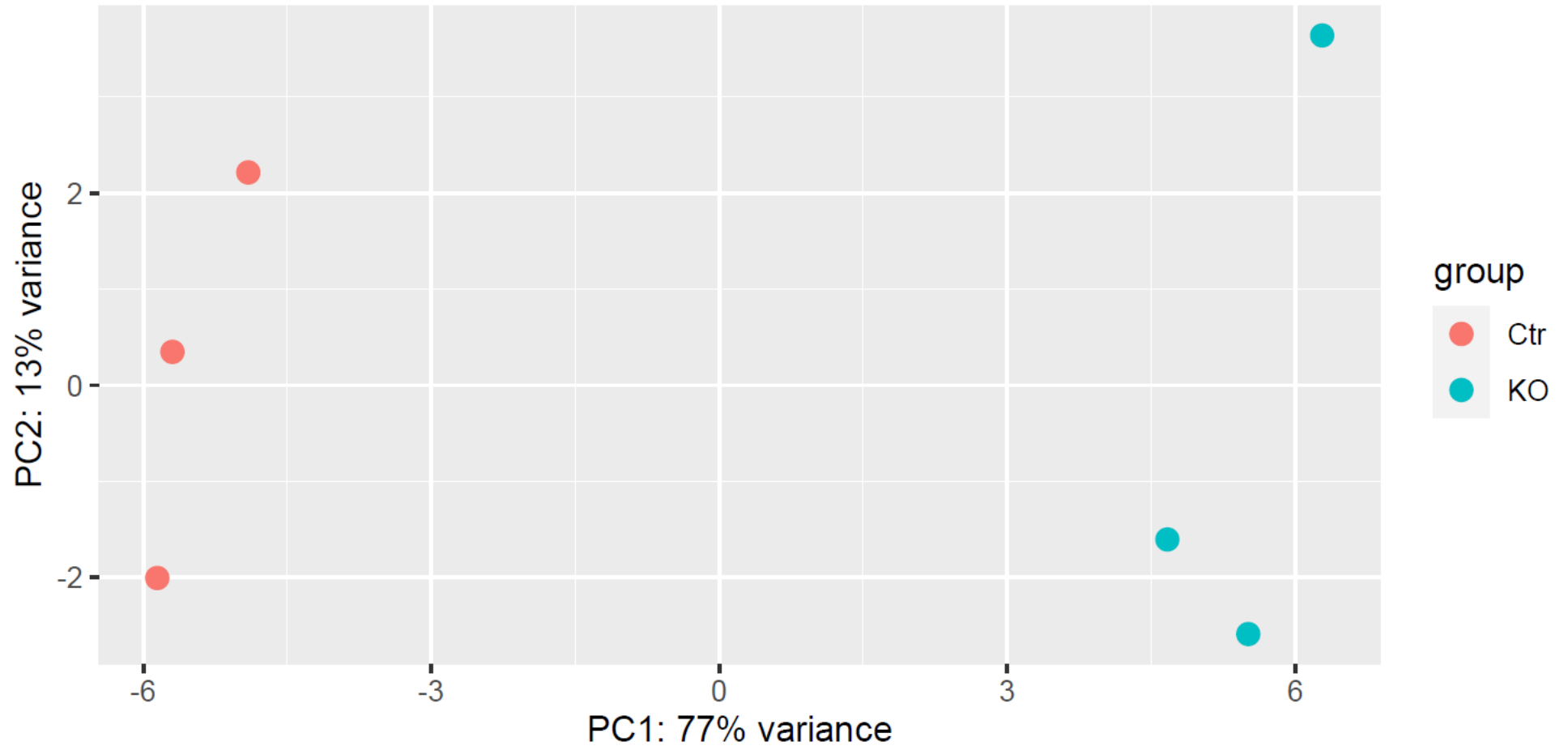The T test is not fitted for this RNA Seq data

Reads Distribution in SRR24971804

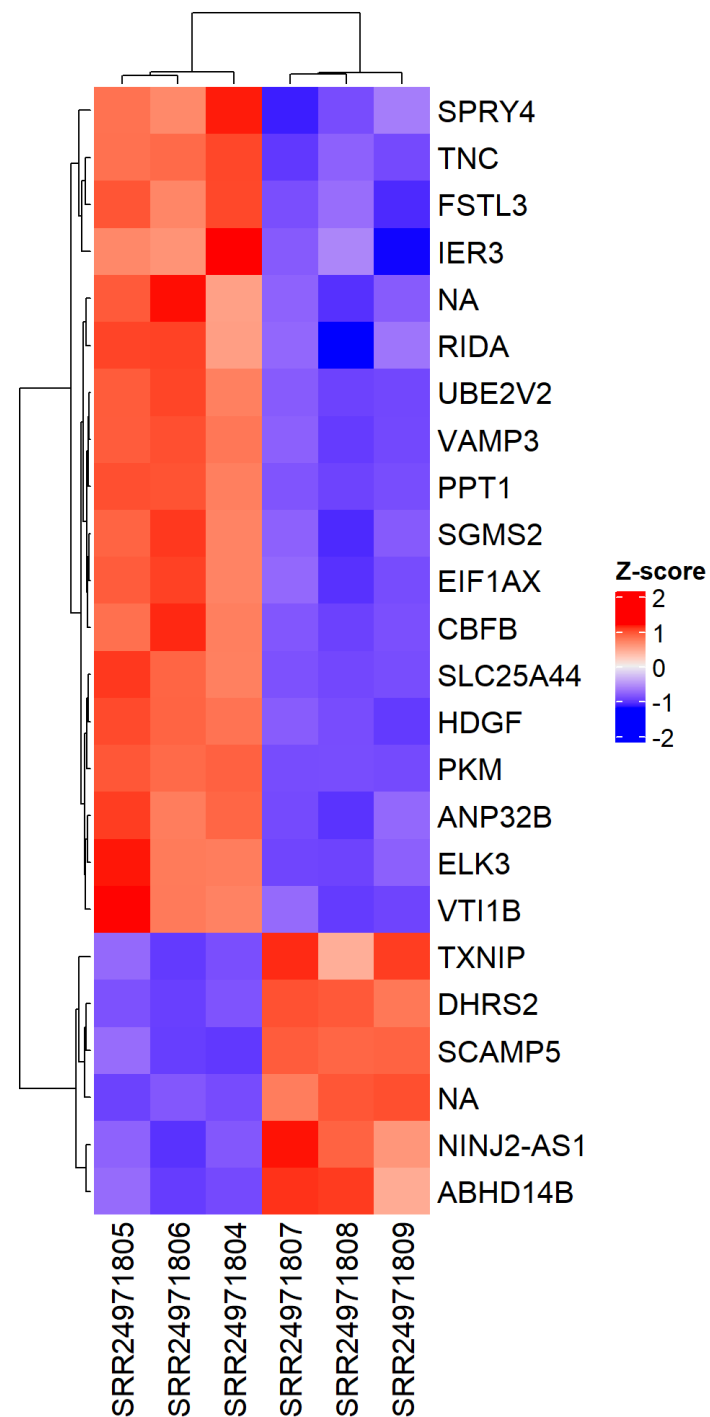# PCA showing genes are significantly differentially expressed between control and KO groups

DESeq package is used to analyze this RNA Seq data, in which the data with negative binomial distribution statistically assayed by Wald test
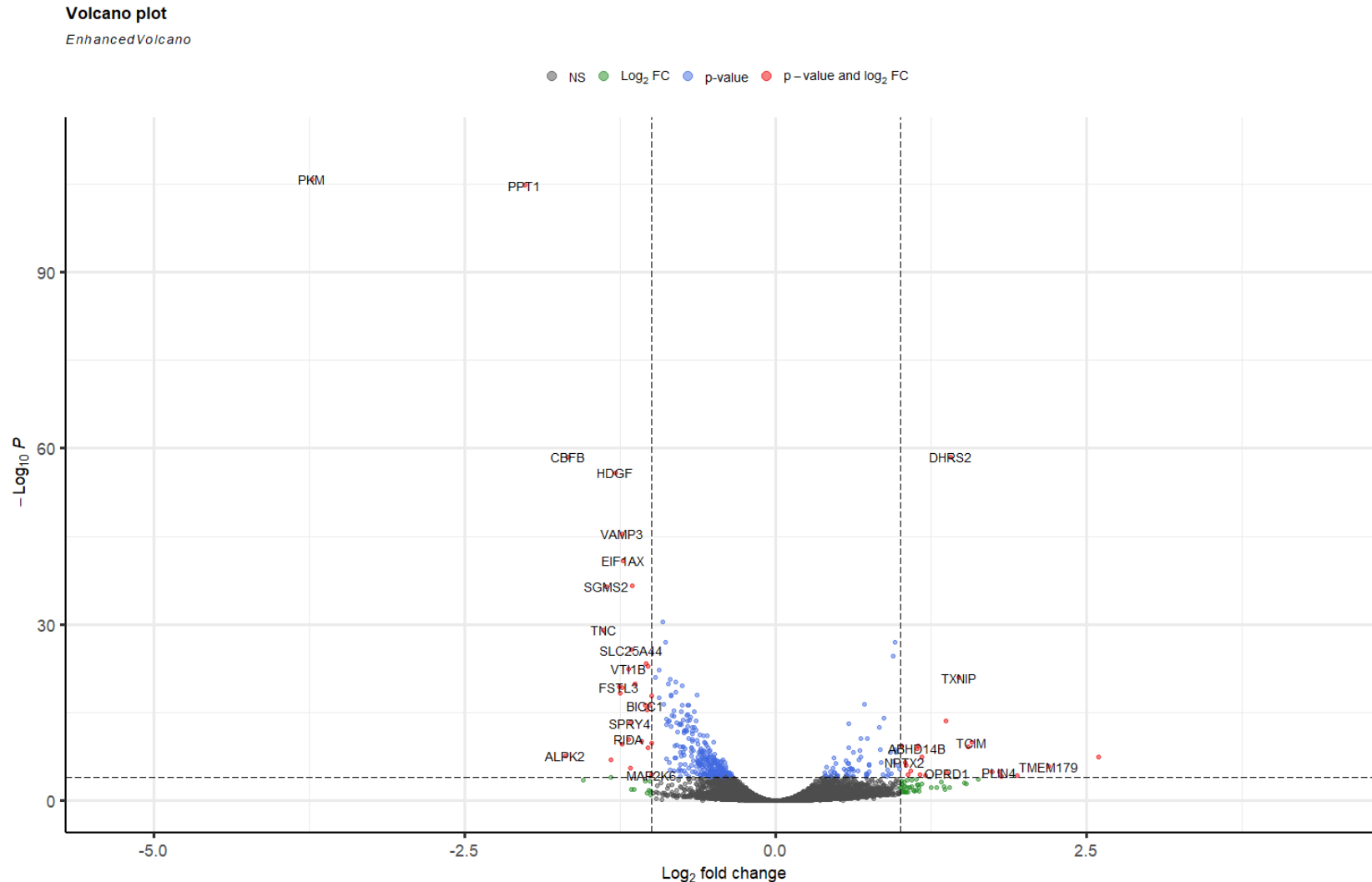
Heatmap for genes up and down regulated

DESeq package is used to analyze this RNA Seq data, in which the data with negative binomial distribution statistically assayed by Wald test
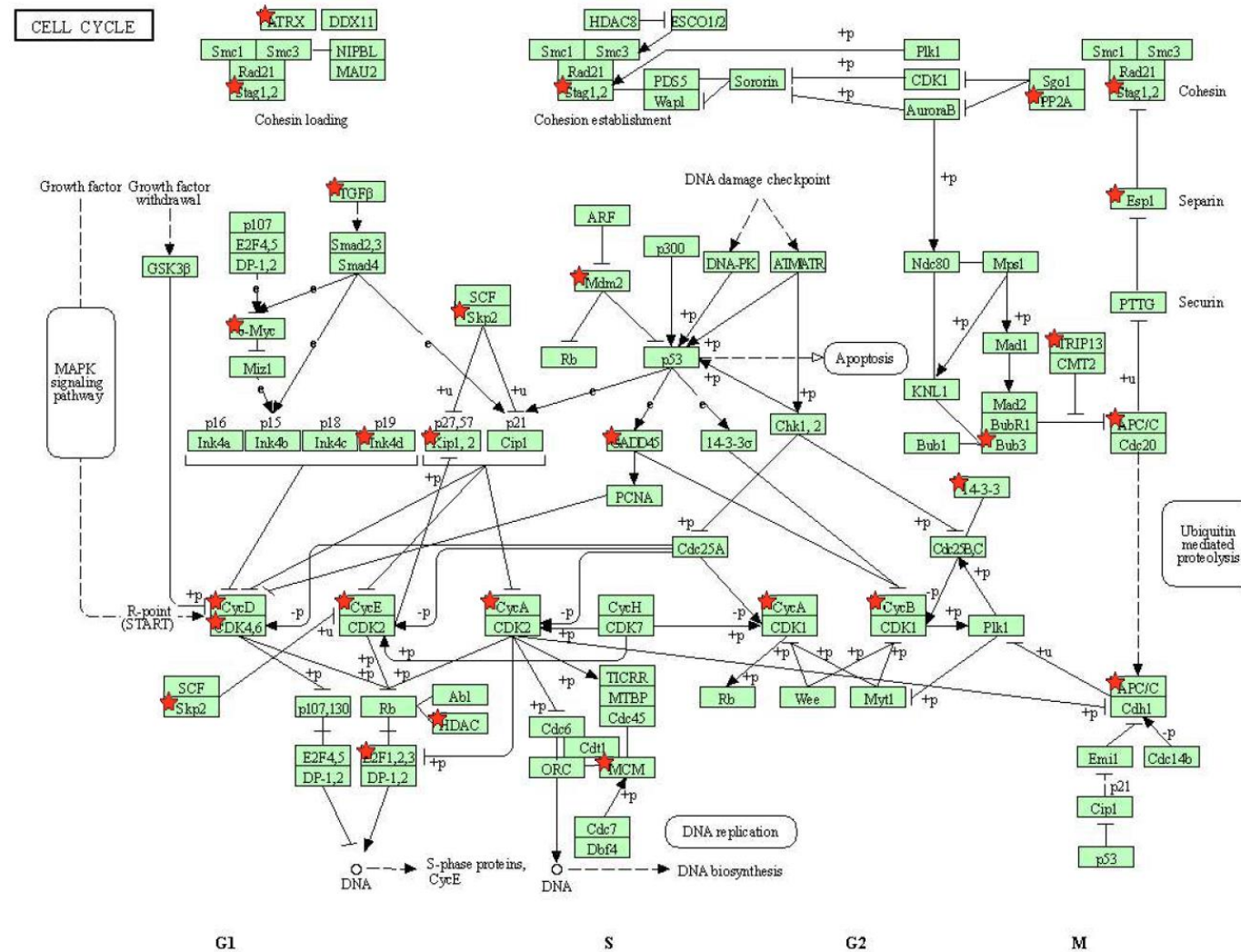
Volcano plot for genes up and down regulated

DESeq package is used to analyze this RNA Seq data, in which the data with negative binomial distribution statistically assayed by Wald test

The up and down regulated genes are involved in cell cycle pathways

The up and down regulated genes are involved in cell senescence