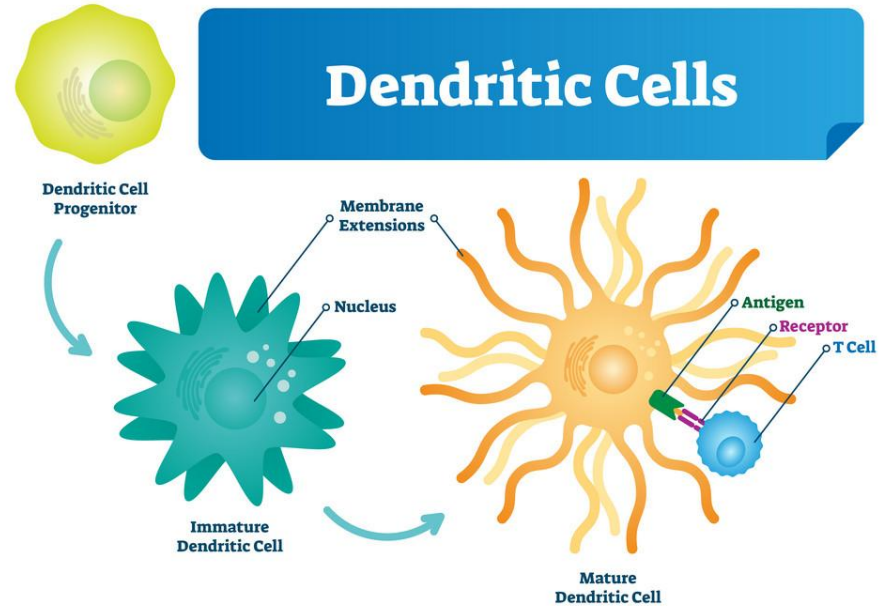


# RNA-seq of stimulated dendritic cells

Group X

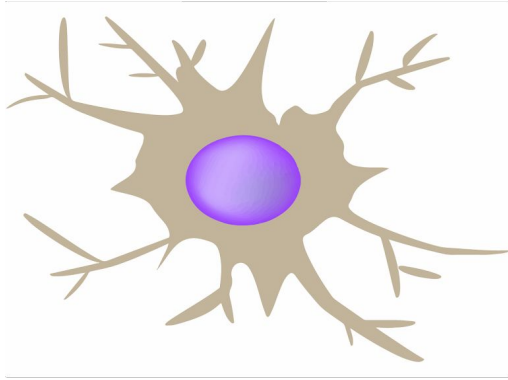
# Dendritic cells mature when exposed to pathogens

- Dendritic cells: antigen-presenting cells
  - Phagocytose pieces of pathogens in surrounding environment
  - Immature: sample pathogens and degrade proteins into presentable peptides
  - Mature: localize to lymph nodes and activate T cells through antigen presentation
- Exposure to bacterial, viral, or fungal pathogen evokes specific transcriptional program through interaction with receptors (e.g. TLRs)
- Serves as link between innate and adaptive immunity

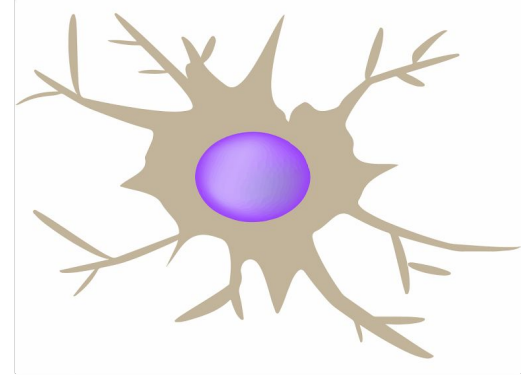


**What transcriptional changes do we see in primary dendritic cells following exotoxin activation?**

# RNA-seq of dendritic cells before and after LPS stimulation



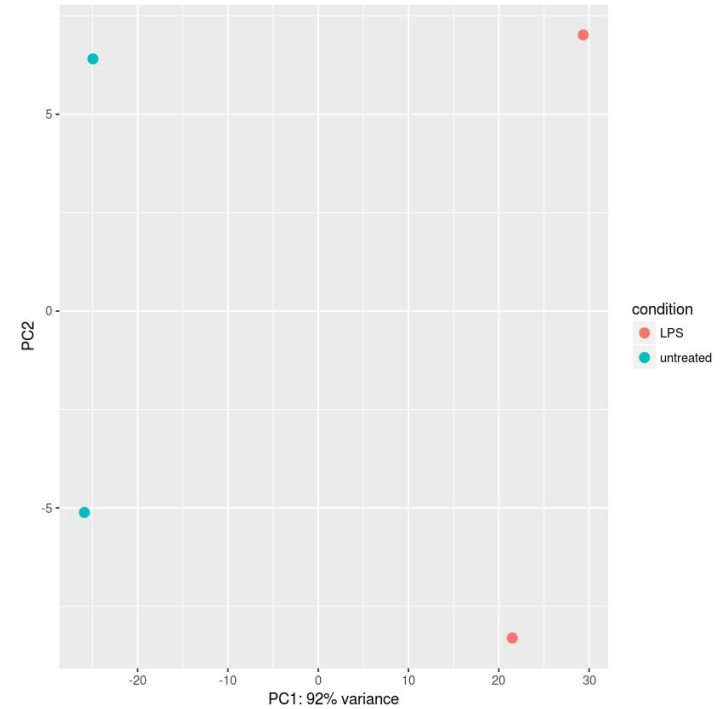
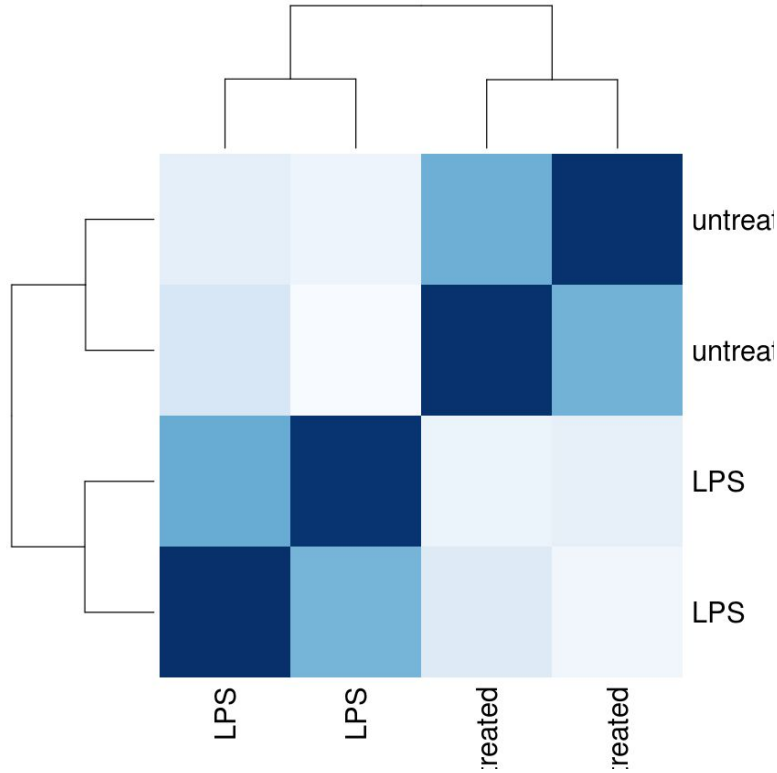
100 ng/mL  
LPS



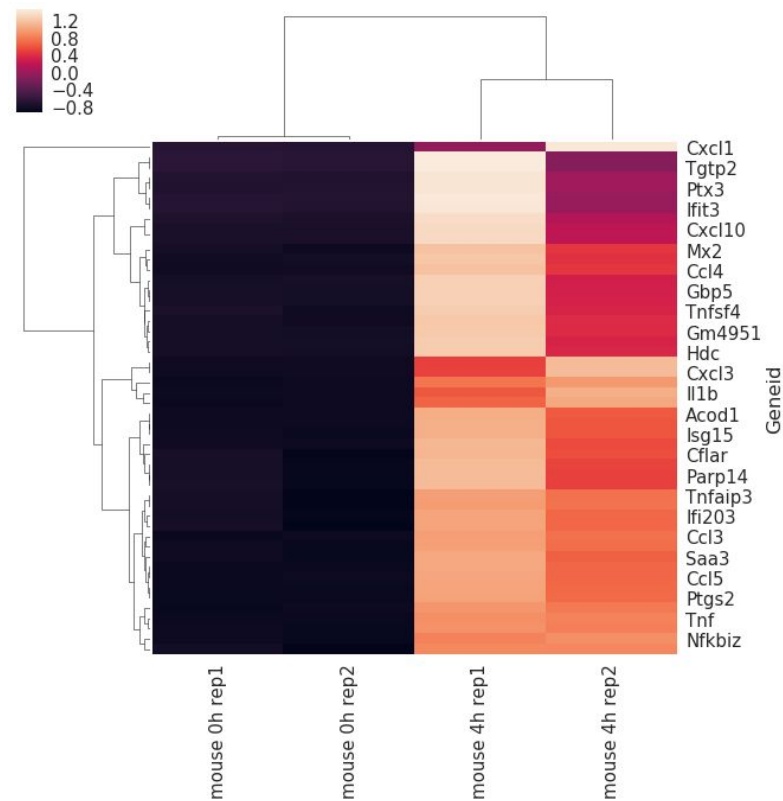
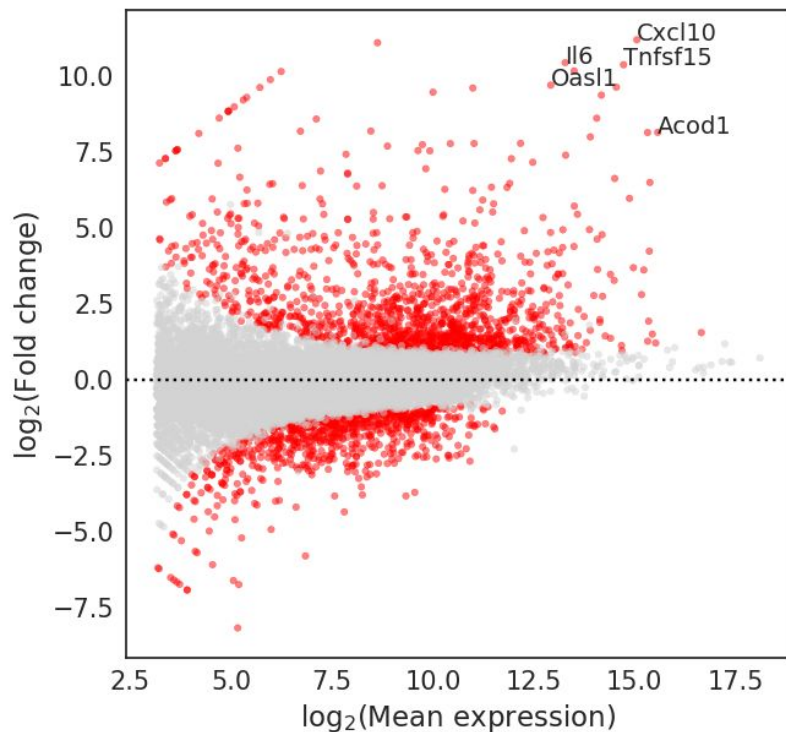
0 hr

4 hr

# Treated and Untreated Replicates have similar gene expression



# Dendritic cells have significant gene expression changes upon 4 hours of LPS treatment



# Pathway analysis

# Conclusions

This shows us that when dendritic cells are stimulated with LPS, there is a significant upregulation in immune response genes.

See upregulation in many genes that encode chemokines.