

# BB512/BB612 - Final Project

May 12, 2022

Using one of the RNAseq datasets listed below (or another dataset that you choose), analyze the data, prepare a written report and present in class your findings, as outlined below:

## Datasets

- airway - RangedSummarizedExperiment for RNA-Seq in airway smooth muscle cells, by Himes et al PLoS One 2014
- macrophage - Human macrophage immune response
- parathyroidSE - RangedSummarizedExperiment for RNA-Seq of primary cultures of parathyroid tumors by Haglund et al., J Clin Endocrinol Metab 2012.
- GSE62944

## Report [80 pt]

A structured Rmarkdown report containing:

- [10 pt] Introduction
- [15 pt] Quality assessment and pre-processing
- [15 pt] Differential Expression Analysis
- [15 pt] Functional Analysis (Enrichment)
- [15 pt] Discussion
- [10 pt] Conclusions
- Session Information (via `sessionInfo()`)
- (References)

## Presentation [20 pt]

A <10 minute in-class presentation:

- What is the question/Why is it important? [5 pt]
- Highlighted methods and results [5 pt]
- Discussion & Conclusions [5 pt]
- On-time [5 pt]