Module 2: Introduction

Overview

In this module, we will discuss how a differential gene expression experiment works. We will talk about what trimming software does and how that is related to differential gene expression. To get you geared to use our differential gene expression pipeline and do further analysis, we will spend time learning about the R statistical programming language and how to use R Markdown to execute code and print analysis reports. We are hoping to use this week to get everyone on the same page with R programming so that we can focus on our research aims going forward.

Learning Objectives

By the end of this module, you'll be able to:

2.1 Biology/Stats (1 hour)

1. Introduce differential expression experiment
2. Introduce effects of parameters
3. Describe how to prioritize candidate genes

2.2 Coding (2+ hours, depending on coding experience)

1. Run introductory R code

2. Generate a R Markdown

2.3 Research/Professional development (30 min)

1. Find help pages on functions in R packages to understand possible arguments and default values