
Introduction to data analysis in R

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Office Hours: Thursdays 3:00 - 4:00 PM

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Tuesday
10:00 PM

Description: This is a short course on data analysis in R. The goal is to get the participants familiar with R code and to appreciate it as a tool to handle common experimental data. The materials are delivered in the form of lectures and interactive exercises.

Pre-requisites: None

Objectives

- To get familiar with R as a tool for data analysis
- To apply basic arithmetic and statistics in R
- To learn to handle experimental data in R (qPCR and images)

Format: Lectures, interactive exercises, and homework assignments

Modules

1. Getting started in R
2. Basic statistics in R
3. Quantifying mRNA using the pcr package
4. Quantifying protein co-localization in fluorescence images using the colocr package

Readings

- Tidy data by Hadley Wickham
- Ahmed M, Kim DR. pcr: an R package for quality assessment, analysis and testing of qPCR data. PeerJ. 2018 Mar 16;6:e4473.
- Ahmed M, Lai TH, Kim DR. colocr: an R package for conducting co-localization analysis on fluorescence microscopy images. PeerJ. 2019;7:e7255.

Course materials: https://github.com/MahShaaban/intro_data_r