**PGR Training-session 5**

**Exercise**

1. Upload the “data\_mice2” dataset into R. This data set includes data on mice’s weight at three different time points (t1 = before, t2= during, t3 = after drug treatment) and under two diet conditions (control, diet)
2. In the “t\_treatment” column, convert the data into a factor, renaming “1”, “2” and “3” as “t1”, “t2” and “t3” respectively
3. Check whether there are outliers in the data set for both treatment and diet condition. Is there any outlier?
4. Check whether data from the different treatment and diet conditions have normal distribution both using the shapiro test and the qqplot test
5. Run a repeated-measure two-way ANOVA. Are treatment and conditions significant? Is their interaction significant?
6. Run post-hoc analyses to assess the effect of treatment for each condition and the effect of condition at each time point of treatment. Which treatment and condition is significant?
7. Plot the results displaying the difference between the two conditions (control and diet) for each time point highlighting for which time point the two conditions differ