## **Exploratory Analysis with R (II)**

Alex Sanchez, Miriam Mota, Ricardo Gonzalo and Santiago Perez-Hoyos

Statistics and Bioinformatics Unit. Vall d'Hebron Institut de Recerca

## **Outline: Exploratory Analysis (II)**

- Introduction: From 1 to 2 or more diomensions.
- Exploring relation between variables
- Introducing Correlation

## From one to more dimensions

- A natural way to start looking at data is, as we have done, on a "one variable-at-a-time" approach.
  - Reasonable way to start understanding the data, but
  - Fails at the possibility of detecting relations between variables, which can be the basis to understand what we had seen before.

## Why are bi/multivariate approaches better?

- Exploring two ore more variables simultaneosuly can provide more information
  - Does there exist a relation between certain variables?
  - How important is this relation?
  - Which is the direction of the relation?