

Introduction to R

CIBIO-InBIO Advanced Course

May 6-8, 2015 @ Vairão Campus

PROGRAMME

DAY 1

- 1: What is R? Installation (R and R-studio), main structure, seeking help
- 2: Functions and packages (and seeking more help)
- 3: Variable modes and operators: numeric (integer, double), character, logical and complex
- 4: Data types I: vectors, matrices, arrays, data frames and lists
- 5: Data types II: special data structures

DAY 2

- 1: Data import-export, workspaces and directories
- 2: Data indexing (rows, columns, which(), etc.)
- 3: Reviewing and tabulating your data (summaries, table(), plot(), str(), xtabs(), etc.)
- 4: Flow functions and cycles (if(), for(), while())

DAY 3

- 1: Simple plotting
- 2: More plotting possibilities (ggplot2)
- 3: Some advanced features: build your functions
- 4: Practice session (individual work and resolving doubts)

```
par(pin=c(6.8, 6.8), mar=c(3.5,3.5,0.2,0.2)+0.1, cex.lab=2, font.lab=2.5, cex
#Observations#
plot(shapeF[,1], shapeF[,2], colourF, bg=backgrndF, asp=1, x
#mtDNAmeans#
points(LSM.F[,1], LSM.F[,2], colourF, bg=bgSP, cex=3, lwd=5)
par(pin=c(6.8, 6.8), mar=c(3.5,3.5,0.2,0.2)+0.1, cex.lab=2, font.lab=2.5, cex
#Observations#
plot(shapeF[,1], shapeF[,2], colourF, bg=backgrndF, asp=1, x
#mtDNAmeans#
points(LSM.F[,1], LSM.F[,2], colourF, bg=bgSP, cex=3, lwd=5)
par(pin=c(6.8, 6.8), mar=c(3.5,3.5,0.2,0.2)+0.1, cex.lab=1.5, font.lab=2.5, c
#Observations#
```