MANGOSOLUTIONS
data analysis that delivers

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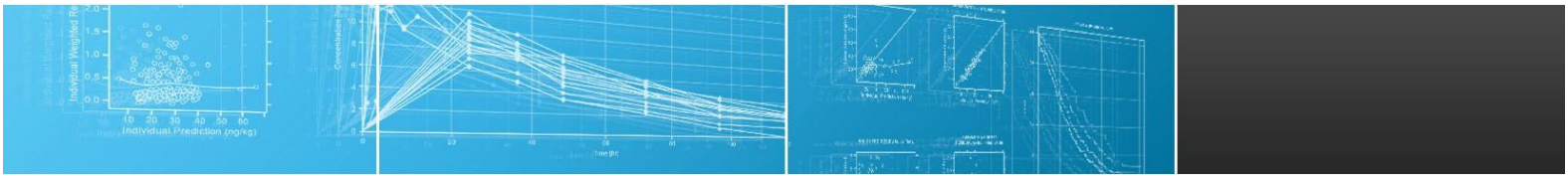
R for Pharmacometrics

Level: Post Beginner
Duration: 2 days
Core Skill: Modelling/Data Manipulation/Data Visualisation

This two day, hands on course is designed to introduce, to those already familiar with the basics of R, some of the tools and techniques available for common pharmacometrics tasks such as data manipulation, aggregation and visualisation.



Prerequisites

- It is assumed that participants have a working knowledge of the basics of R
- It is assumed that participants are familiar with pharmacometrics and tools used in the field such as NONMEM.

Overview

- Recap of the R basics
- Writing R Functions
- Importing and Manipulating Data
- Graphics with ggplot2
- Model Prediction and Simulation
- Working with NONMEM Data in R
- Generating PK Reports from R

Teaching Approach

This will be a hands on course taught using the RStudio interface with exercises throughout. All attendees will need access to a computer and will need to be able to install a number of R packages prior to the training, a full list will be sent to participants prior to the training. The course will be taught by Mango Solutions consultants.

Details

Recap of the Basics
- Data objects
- Working with R functions

Writing R Functions
- The structure of an R function
- Control structures
- Working with loops

Importing and Manipulating Data
- Reading data into R
- The basics of dplyr for manipulation
- Data summarisation and aggregation

Graphics with ggplot2
- Basic graphics with qplot
- Controlling aesthetics
- Panels and groups

Model Prediction and Simulation
- Model fitting in R
- Non-linear models in R
- Simulation and bootstrap

Working with NONMEM Data in R
- NONMEM outputs
- Working with NONMEM outputs
- The RNMImport package

Generating PK Reports from R
- Overview of dynamic reporting
- The basics of RMarkdown
- Including R output in reports