Advanced course on Pharmacometrics modeling with Monolix

Sunday, October 30. 2022

This training will give you the keys to move your modeling skills to the next level. It is designed for modelers with already some experience of Monolix, who wish to i) better understand the algorithms and their options, ii) learn how to implement complex models, iii) improve their strategy for model building.
The course will alternate lectures and interactive hands-on sessions with Monolix.

I - Algorithms and good practices for parameter estimation

- Estimating the population parameters: theory and practice
  - SAEM and its settings
  - Assessing the convergence
  - Handling parameters without variability
  - Bayesian estimation of population parameters

- Settings of MCMC: transition kernels, automatic stopping rule

- Estimating the Fisher Information Matrix with linearization or stochastic approximation
- Estimating the likelihood with linearization or importance sampling Monte Carlo

II - Methods for statistical model building

- Diagnostics for the statistical model
  - interpretation of diagnostic plots
  - performing unbiased statistical tests
  - defining and using the shrinkage correctly
- Strategies for automatic model building
  - covariate search using COSSAC
  - model building using SAMBA

III - Implementing complex PKPD models

- Modeling non-continuous data
- Sequential and simultaneous approaches for joint models
- Complex statistical models
  - non-standard inter-individual variability

- inter-occasion variability
- complex covariate-parameter relationships

Fees: $500 for Industry, $250 for Trainees