



**Pharmacy and Pharmaceutical  
Technology Department**

10<sup>th</sup>-12<sup>th</sup> March 2003

**Parametric and nonparametric  
population PK and PD modelling.  
Aplications in Therapeutic Drug  
Monitoring**

## Program

### 10 de Marzo de 2003

9:30 Welcome. Dr. R. Jelliffe and Dr. NV Jiménez Torres  
9:45 Introduction to basic concepts in population pharmacokinetics.  
Dr. R. Jelliffe.  
10:30 Break  
11:00 Nonparametric population models, NPML, NPEM. Dr. R. Jelliffe.  
11:30 Discussion  
11:45 Nonparametric Adaptive Grid, NPAG, modelling. Dr. R. Jelliffe.  
12:15 Discussion  
12:30 Parametric population models.  
Iterative 2 stage Bayesian. Dr. R. Jelliffe.  
NONMEM. Dr. VG Casabó.  
13:00 Discussion  
13:30 Neural Network modelling: A New paradigm?. Dr. E. Soria.  
14:00 Lunch.  
  
15:00 Bayesian aproach. Dr. VG Casabó  
15:30 Hand-on session getting the assay error polynomial. Dr. R. Jelliffe.  
15:45 Entering and storing past doses and levels, analysing the data. Dr. Dr. R. Jelliffe.  
A patient on Gentamicin  
A patient on Tobramycin  
17:00 Break  
17:30 Hands on session. Dr. R. Jelliffe  
The patient on gentamicin  
The patient on tobramycin  
18:00 Demo Vancomycin. Setting the initial goals, planning the initial regimen. Dr. R. Jelliffe.  
18:15 Hands on session. Setting the initial goals, planning the initial regimen. Dr. R. Jelliffe.

### 11 de Marzo de 2003

9:30 Comparing parametric and non parametric approaches. IT2B, NPEM and NPAG. A. Bustad.  
10:00 Multiple model (MM) dosage design for maximum precision regimens. Dr. R. Jelliffe.  
10:30 Getting MM Bayesian posterior individual parameter distributions. Dr. R. Jelliffe  
  
11:00 Break  
11:30 Dicotomous and ordinal response modelling. Dr. VG Casabó

12:00 Continous response modelling. Dra. A. Aldaz.  
12:30 The behaviour of Efavirenz. Dr. NV Jimenez Torres.  
13:00 The behaviour of Cyclosporine. Dra. B. Porta.  
13:30 Lunch

15:00 Computer clusters and Web access for making large PK/PD models. Dr. N. Hoem.  
15:30 Making large and nonlinear population models. Dr. N. Hoem.  
16:00 Using BOXES making a Michaelis-Menten model of Cyclosporine. Dr. N. Hoem.  
16:30 Demo setting up Big IT2B and NPEM modelling cyclosporine. Dr. N. Hoem.  
17:00 Break  
17:30 Hands-on session – Managing a patient on Digoxin. Dr. R. Jelliffe.

### 12 de Marzo de 2003

9:30 Pharmacokinetic and pharmacodynamic (PK/PD) modelling and simulation in oncology. Dr. JJ Pérez-Ruixó  
11:00 Break  
11:30 The behaviour of Cyclofosfamide. Dr. JJ. Pérez Ruixó  
12:00 The behaviour of 5-Fluoracil. Dra. M. Merino  
12:30 The behaviour of Paclitaxel. Dr. NV Jiménez Torres  
13:00 The behaviour of Gentamicin. Dr. VG Casabó  
13:30 Lunch

**Modelling with neural networks: some pharmaceutical examples**  
15:30 Digoxin. Dr. G.Camps  
16:00 Cyclosporine. Dr. A.Serrano  
16:30 Eritropoetin. Dr. JD Martín

## Faculty

*Azucena Aldaz Pastor*, Facultad de Farmacia, Universidad de Navarra.  
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## Chairmen

Dr. Roger Jelliffe  
Dr. NV Jiménez-Torres

## Coordinators

Dra. A. Aldaz.  
Dr. VG. Casabó  
Dra. M. Merino.

## Organized by

Pharmacy and Pharmaceutical Technology Department.  
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