Course Name: Introduction to pharmacogenomics – clinical applications
VIIth edition
Date: 2-6 March 2015
Organizer: Prof. Manuela Grazina  Email: mmgrazina@gmail.com

Program and calendar (NOTE: ENDING TIME IS ESTIMATED AT 20.00H):

Monday – day 1
14:00 Introduction
14:15 Basic concepts in Pharmacogenomics
Manuela Grazina (PhD, FMUC)
14:45 Pharmacokinetics and pharmacodynamics
Amílcar Falcão (PharmD, PhD, FFUC); chaired by Manuela Grazina
15:45 Mechanisms mediating drug metabolism
Manuela Grazina (PhD, FMUC)
17:00 Pharmacogenetics of drug receptors
Manuela Grazina (PhD, FMUC)
18:00 Objectives and evaluation

Tuesday – day 2
14:00 Mutational effect and genetic toxicity, DNA repair: implications in Toxicogenomics.
Manuela Grazina (PhD, FMUC)
15:30 Pharmacovigilance – Pharmacogenomic implications
Maria Teresa Herdeiro (PharmD, PhD, Health Sciences Department, University of Aveiro; Faculty of Medicine, University of Porto; ENCePP Steering Group member-EMA); chaired by Manuela Grazina
16:30 Safety and Methods for Pharmacogenomics Testing. Impact of Pharmacogenomics in Biosafety.
Manuela Grazina (PhD, FMUC); Emília Telo (PhD, ACT)
18:00 Nutrigenomics: concepts and applications to Pharmacogenomics and clinical practice
Manuela Grazina (PhD, FMUC)
19:00 Pharmacogenetics in clinical practice – update on heart disease
Rogério Teixeira (MD, CHUC); chaired by Manuela Grazina
Program and calendar (cont.):

**Wednesday – day 3**
13:00 Pharmacogenomics of addiction (alcoholism and drugs of abuse)  
*Manuela Grazina (PhD, FMUC)*
14:30 Genetic profile and therapeutic approach to pain  
*Ana Valentim (MD, HUC) ; chaired by Manuela Grazina*
15:30 Pharmacogenomic glance of Anaesthesia  
*Teresa Lapa (MD, CHC) ; chaired by Manuela Grazina*
16:30 Papers presentation and discussion I  
*(presentation by students; discussion with speakers)*  
*Manuela Grazina (PhD, FMUC)*
18:00 Targets for pharmacogenetic profiles and therapeutics in clinical practice – time to think science  
*Manuela Grazina (PhD, FMUC)*

**Thursday – day 4**
14:00 Pharmacogenomics and Toxicogenomics – the good, the bad and the ugly  
*Manuela Grazina (PhD, FMUC)*
15:00 Genes, Pharmacogenetics and cancer  
*Rui Medeiros (PhD, IPO-Porto) ; chaired by Manuela Grazina*
16:30 Papers presentation and discussion II  
*(presentation by students; discussion with speakers)*  
*Manuela Grazina (PhD, FMUC)*

**Friday – day 5**
13:00 Studies of pharmacogenomics in R&D of new molecules: international guidelines  
*Maria Isabel Vieira (PhD, Infarmed) ; chaired by Manuela Grazina*
14:00 Ethics and pharmacogenomics: impact in Medicine  
*(presentation by students; discussion with speakers)*  
*Manuela Grazina (PhD, FMUC)*
15:30 Pharmacogenomics and population studies  
*Adrián LLerena (MD, PhD, FMUE) ; chaired by Manuela Grazina*
16:30 Seminar: Pharmacogenomics and Theranostics: Clinical and Regulatory implications  
*Adrián LLerena (MD, PhD, FMUE) ; chaired by Manuela Grazina*
**Meet the expert session**  
*(students are asked to delineate questions in groups, based on papers from the experts’ team, and discuss with the experts DURING the SEMINAR)*  
*Adrián LLerena (MD, PhD, FMUE) ; chaired by Manuela Grazina*
18:30 Closing remarks
AVALIAÇÃO

Português

A sessão “Meet the Expert” está incluída para proporcionar aos alunos a interação com Cientistas especializados internacionais. A discussão de artigos, em formato “Paper Club”, são organizados para analisar os resultados e diretrizes internacionais mais relevantes e “up-to-date” na literatura atual.
Os alunos são convidados a sugerir uma “Guideline” para a aplicação de ensaios farmacogenómicos na prática clínica, numa sessão especial de “Discussão aberta”.

Forma de avaliação: Nota final= A + B + C (max 20 valores)

A- Tarefa 1- apresentação de artigos científicos – grupos de 2-3 estudantes:

a. A Coordenadora distribuir previamente artigos científicos a serem analisados e apresentados pelos alunos do grupo, de forma repartida – max 10 min. A apresentação deverá seguir o esquema seguinte (max 10 slides):
   i. Introdução
   ii. Objetivos
   iii. Métodos
   iv. Resultados
   v. Conclusões
   vi. Análise crítica

Os oradores poderão formular questões aos alunos para discussão.

B- Tarefa 2- Pesquisa autónoma e apresentação de “Guideline”, baseada em documentos peer-reviewed e/ou de referência/legislação – uma por cada participante (individual)

a. De acordo com o tema do Programa (“Application of pharmacogenomics in the clinical practice and ethic issues associated”), os participantes deverão preparar um slide ppt com uma guideline que achem que deve ser seguida. A(s) referência(s) na(s) qual(ais) a guideline se baseia deve(m) ser também incluída(s). O slide ppt e o(s) pdf(s) dos documentos de consulta devem ser enviados à Coordenadora por email até ao dia 4 (10:00h) durante o curso, com a identificação do participante (nome do ficheiro: “nome_task2 PhCGx2015”).

b. As guidelines serão apresentadas na Sessão “OPEN DISCUSSION”, no dia 5 (~14:00h).

C- Task 3- Delinear 2 questões baseadas em artigos científicos previamente distribuídos e discussão com os “Experts” – grupos de 2-3 estudantes:

a. Tendo em conta o artigo científico (publicado pela equipa do “Expert”) enviado previamente pela Coordenadora ao grupo, é pedido aos participantes para prepararem um slide ppt com 2 questões a colocar ao “Expert”. A referência de base para as questões deverá ser também incluída. Este slide tem de ser enviado à Coordenadora por email até ao dia 4 (19:00h) durante o curso, com a identificação do participante e do número do grupo (nome do ficheiro: “grupoN_task3 PhCGx2015”).

As questões serão apresentadas durante o SEMINÁRIO, no dia 5.
EVALUATION

English

A “Meet the Expert” session is included to provide the students to interact with international expert scientists. “Paper Club” discussions are organized for achieving the most relevant and up-to-date findings in current literature and international guidelines. Students are asked to suggest a guideline for the application of pharmacogenomic assays in the clinical practice, in an “Open discussion” special session.

Form of evaluation: Final Mark= A + B + C

A- Task 1- Presentation of scientific papers – groups of 2-3 students: max 6 val
   a. The coordinator distributes papers to be prepared in groups and presented – max 10 min each. The presentation should follow the scheme (maximum 10 slides):
      i. Introduction
      ii. Objectives
      iii. Methods
      iv. Results
      v. Conclusions
      vi. Critical analysis
      The speakers ask questions to the students for discussion.

B- Task 2- Autonomic search and present major guideline based on peer-reviewed papers and/or reference documents/legislation – one from each student: max 8 val
   a. According to the subject in the programme (“Application of pharmacogenomics in the clinical practice and ethic issues associated”), the students should prepare a ppt slide with one guideline that one think that it should be followed. The reference(s), in which the guideline was/were based on, has/have to be also included. The slide and pdf of paper(s) have to be sent to the coordinator by email until the end of day 4 (10:00 a.m.) during the course, with the identification of the student (name of the file “name_task2 PhCGx2015”).
   b. The guidelines will be presented at the OPEN DISCUSSION Session, day 5 (~2:00 p.m.).

C- Task 3- Delineate 2 questions based on given papers and discuss with the experts – groups of 2-3 students: max 6 val
   a. According to the paper (published by the Expert team) sent previously by the Coordinator to the group, the students are asked to prepare a ppt slide with 2 questions. The reference, in which the questions were based on, has to be also included. The slide has to be sent to the coordinator by email until the end of day 4 (7:00 p.m.) during the course, with the identification of the students and group number (name of the file ppt “groupN_task3 PhCGx2015”).
   The questions will be presented during the SEMINAR Session, day 5.
Bibliografia principal | Main bibliography


Horstmann S, Binder EB. Pharmacogenomics of antidepressant drugs. Pharmacol Ther. 2009 Jun 27. [Epub ahead of print].


Other texts | outros textos.