



Course Announcement

Genetics of Epilepsy IV **E-Learning course** **from October 2007 – May 2008**

Course description

Genetics has taught us a lot in recent years about the origin and the mechanisms that can lead to epileptic seizures. Three main fields are important when we want to learn about the genetic epilepsies:

- (i) the clinical genetics, i.e. the epileptic phenotypes that are associated with specific mutations,
 - (ii) the genetic defects of the different syndromes themselves, and
 - (iii) the pathophysiological mechanisms by which these defects can lead to epileptic seizures.
- This course gives the participants the opportunity to study all three aspects all the way from basic science to clinical practice.

We have divided the course in 13 sections which deal in the first basic and introductory part with epidemiology, the principles of classical, i.e. Mendelian, and molecular genetics, and finally with the structure and function of ion channels, since most of the genetic defects identified so far affect different types of ionic channels. In the second part, the genetic epilepsies are summarized in different groups and the specific genetic defects, the associated syndromes and their pathophysiology are discussed in detail. In addition, we have dedicated a few chapters to miscellaneous topics which in our opinion are important to deal with patients presenting with genetic epilepsy syndromes, like a separate chapter on 'phenotyping', or that affect upcoming and interesting new research areas, such as 'pharmacogenetics'. We hope that by this approach we will meet the interests and expectations of both researchers and clinicians who participate in this e-learning course, which we perform now in the fourth year.

All chapters are written by clinical specialists or basic scientists whose own research deals with the respective topics. The texts are updated every year so that you will learn about the most recent advances of genetic research. Two weeks are dedicated for each section. The first week is usually reserved for reading, asking and discussing questions directly related to the respective topic in the electronic forum. The participants are asked to discuss heavily among the group and the tutors will comment questions and answers afterwards. In addition, the tutors may stimulate this phase by asking a few questions via the online medium, in particular when there are not enough questions from the participants. In the second week, a so-called CSCL (Computer Supported Collaborative Learning) -task has to be solved and discussed within the group. During this phase, the acquired knowledge has to be used to solve a concrete research or clinical problem or both.

Learning objectives

The definite objectives of this course are to learn (i) the basic principles of epidemiology, molecular and clinical genetics, and ion channel gating, (ii) the specific clinical aspects, genetic defects and possible pathophysiological consequences of the main groups of hereditary epilepsies, and (iii) about pharmacogenetics. The participants are asked to reproduce the incorporated knowledge in specific questions and in particular in practical tasks for each topic. The online character with discussion of the results by both the participants among themselves and the tutors contributes to a very active acquisition of knowledge.

Entry criteria

- 3 years of training in neurology, neuropsychiatry, clinical neurophysiology, psychiatry or neurosurgery or combinations of these.
- Minimum of 4 months of EEG training

Certification

Successful participation in this course is awarded up to 65 CPs (equivalent of 1 month) for the elective "Genetics of Epilepsy" of the European Certification in Epileptology for Medical Doctors. Participants are expected to spend about 4 hours per week for individual study of the learning material provided, and to take part actively in the discussion fora and to complete tasks.

Applications sent to the EUREPA Secretariat should contain

- A signed confirmation of the neurology department on the 3 years of neurological or comparable training;
- A signed confirmation on the 4 months of EEG training;
- CV;
- List of publications.

Duration

The course will start in the middle of October 2007 and last until the end of May 2008 with two breaks at Christmas and Easter.

Deadline for application is **July 31, 2007**.

Course fee: The fee will be Euro 600 respectively Euro 500 for EUREPA members. A restricted number of bursaries will be available.

Number of participants: 30

Technical requirements:

Personal Computer with CD-Rom drive

Operating system: Windows 95, 98 / 2000 / NT / XP (incl. windows media player), Apple; Linux

Internet access: Modem, ISDN (64 kbit) or DSL

Browser: Internet Explorer (recommended) 5.5 (and higher) (cookies activated); Netscape Navigation; Safari; Mozilla

Responsible for the course content: Prof. Dr. Holger Lerche

For further **information**, please contact the EUREPA Secretariat:

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