



Université de Montpellier
FACULTÉ
 de
MÉDECINE
 Montpellier-Nîmes



UNIVERSITÉ
PARIS
DESCARTES



EUROPEAN CYTOGENETICISTS ASSOCIATION (E.C.A.) European Advanced Postgraduate Course in Classical and Molecular Cytogenetics

Director: Professor Jean-Michel Dupont, Paris - France

Objectives

This course was started by Professor Jean Paul Bureau 22 years ago and has been held in Nîmes under his directorship ever since. It is designed to provide advanced training in constitutional, haematological, and oncological cytogenetics to medical graduates, pharmacists, pathologists, biologists, health professionals and researchers, with an academic qualification. The students will be trained to identify genetic abnormalities for diagnosis and prognosis, and for fundamental and applied research using both classical and molecular cytogenetic techniques. The course is co-organized by E.C.A. and two French Universities, either as a **Diploma (Basic = only the lectures or Advanced = lectures + practical training)** or as a stand-alone course (lectures only)



Practical information

Lectures: A ten-day course held in February/March of each year.

Venue: Faculty of Medicine, Nîmes, France.

Official language: English.

Practical training (only for students registered for the advanced Diploma): A training of maximum 2 months in a cytogenetic laboratory. A list of laboratories is provided during the theoretical course.

Assessment : The assessment for the **basic diploma** will be on the basis of a one-hour examination held at the end of the lecture course. The knowledge of the students for the **advanced diploma** will be assessed in September by a written test (three questions) and an oral examination including a presentation (10-15 min) related to the practical training. The University will award a diploma to only those students who have passed.

All participants (including those for the stand-alone course) will receive a certificate of attendance by the E.C.A.

Topics (see opposite page).

Accommodation

A special price is available for participants in the 4* Vatel hotel close to the course venue. We highly recommend that all participants stay in this hotel where all the lecturers will be hosted in order to promote interactions during the course.

Accommodation is included in the stand-alone course fee

Registration

Registration opens in September and closes on January 30th. To register please send a letter of application together with your CV by e-mail to one of the organizers mentioned below. If you are accepted you will receive a registration form.

Prof. Jean-Michel DUPONT
 Laboratoire de Cytogénétique
 Hôpital Cochin
 27 rue du Fbg St Jacques
 75014 Paris, France
jean-michel.dupont@aphp.fr
sylvie.mendez@aphp.fr

Prof. Thierry LAVABRE-BERTRAND
 Laboratoire de Biologie Cellulaire et
 Cytogénétique Moléculaire
 Faculté de Médecine Montpellier-
 Nîmes
 Avenue Kennedy
 30900 Nîmes, France
tlavabre@univ-montp1.fr
marie.martinez-lucon@umontpellier.fr

Registration fees

Diploma: From €360 to €1780 depending on the status of the student. Accommodation **NOT included**

Stand-alone course: €1300 (E.C.A. members) or €1400 (Non E.C.A. members); accommodation **included** on a shared double room basis. Extra fee for a single room on request.



2018 Course provisional program

This approximately 55 hour theoretical part of the course attempts to cover the field of cytogenetics in the broadest sense. The topics can be divided into the following categories:

Technical aspects:

Classical Cytogenetics: Cell culture techniques; Chromosome staining methods (Q-, G-, C-, R- banding and high resolution banding);

Molecular Cytogenetics: Methods and principles of Fluorescence In Situ Hybridization (FISH) and MFISH; Array CGH; Application of Massively Parallel Sequencing to Cytogenetics; Production and use of molecular probes; Database use in Cytogenetics;

Laboratory quality assessment.

Clinical cytogenetics:

Basics: Frequency of chromosome disorders; Cell cycle, mitosis and meiosis, gametogenesis; Heterochromatic and euchromatic variants; Numerical chromosome abnormalities; Structural abnormalities: translocations, inversions, insertions, deletions, rings, markers; Risk assessment for balanced abnormalities; X inactivation; numerical and structural abnormalities of the X and the Y; Mosaicism; Chimaeras; ISCN 2013.

Clinical: Phenotype of common autosomal and gonosomal aneuploidies; Chromosome abnormalities in recurrent abortions; Cytogenetics and infertility; Microdeletion syndromes; Uniparental disomy and its consequences; Genomic imprinting; Genetic counselling and ethical issues in cytogenetics.

Prenatal diagnosis: Indications, methods and interpretation; Risk assessment for chromosomal abnormalities; Non-invasive methods using foetal nucleic acids and foetal cells in maternal blood; Pre-implantation diagnosis.

Cancer Cytogenetics: Molecular approach to cancer cytogenetics; Predisposition to cancer, Chromosome instability syndromes; Chromosome mutagenesis; Solid tumors; Clinical application in onco-haematology.

Other:

Genome architecture; Structure of chromatin; Structure of metaphase chromosomes, Mechanisms of chromosome aberrations; Origin of aneuploidy; Evolution and plasticity of the human genome; Animal cytogenetics; Plant cytogenetics.

The students will have the opportunity to evaluate the course.

The **European Cytogeneticists Association** offers **two scholarships** for the **European Advanced Postgraduate Course in Classical and Molecular Cytogenetics** to candidates of excellence. The Education Committee of the E.C.A. will select the suitable candidates.

The scholarship includes registration to the course and accommodation in Vatel Hotel in a shared double room but **does not include travel costs.**

Scholarships will not be allocated to students whose registration is paid by a third party institution.