

## Faculty of teachers

The staff at the Stereology Course are professional stereologists. Among them are research scientists, award winning teachers, and clinicians who have made significant contributions to the field of design based stereology and have first hand experience applying these methods.

Their common interests and varied backgrounds provide a workshop atmosphere that is conducive to teaching design based stereology to individuals with a wide range of previous experience with stereology and permits a wide range of specific applications to be discussed in detail during the course.

The course is hosted by Mara Dierssen of Centre de Regulació Genòmica (CRG), Barcelona and the faculty of teachers will be:

Hans Jorgen G. Gundersen · Stereological Research Laboratory  
University of Aarhus, Aarhus,  
Denmark

Jens R. Nyengaard · Stereological and Electron  
Microscopy Laboratory  
University of Aarhus, Aarhus,  
Denmark

Carlos Avendaño · Dpto. Anatomía, Histología  
y Neurociencia  
Fac. de Medicina, Univ. Autónoma  
de Madrid, Madrid, Spain

Luis M. Cruz-Orive · Dpto. de Matemáticas, Estadística  
y Computación  
Fac. de Ciencias, Univ. de Cantabria,  
Santander, Spain

Lars Pedersen · Visiopharm, Hørsholm, Denmark

Gemma Pascual · Olympus Óptica España, Barcelona,  
Spain

## Location

Centre de Regulació Genòmica (CRG).  
CRG is placed at the Barcelona Biomedical  
Research Park (PRBB) building:  
Parc de Recerca Biomèdica de Barcelona  
c/ Dr. Aiguader, 88  
E-08003 Barcelona, Spain

## Dates

April 18th-20th of 2007

## Registration and fees

To register, fill out the form that appears in the web  
<http://www.olympus.es/corporate/eentssponsoring1219.html>  
and send a mail to [informacion.micro@olympus.es](mailto:informacion.micro@olympus.es)

Your registration will be confirmed within two weeks  
by e-mail.

For more information contact: Conchita Royo.  
Phone: +34 93 241 46 65

Reserve early for the I Olympus Stereology Course.  
Registrations will be handled on a first come first  
serve basis.

To optimize individualized instruction during the workshop  
and ensure robust faculty-student interaction, the number  
of participants will be limited to 20.

Registration fee: 650 €  
(includes course materials (a calculator, a pair of scissors,  
a ruler, etc.), coffee breaks, lunches, dinners, social event).

For more information contact:  
[informacion.micro@olympus.es](mailto:informacion.micro@olympus.es)  
or visit [www.olympus.es](http://www.olympus.es)

**OLYMPUS**

## 1st Olympus Stereology Course

Centre de Regulació Genòmica (CRG)  
Parc de Recerca Biomèdica de Barcelona (PRBB)

Barcelona, Spain, April 18-20, 2007

**OLYMPUS**  
ACADEMY

**CRG**  
Centre  
de Regulació  
Genòmica

## Objective of the course

This course presents theory and practical techniques of stereology for obtaining reliable quantitative data from samples of 3D structures. These structures can be homogenous or heterogeneous. The focus is on applications in biosciences. Challenges and opportunities for non-destructive measurements at microscopic versus macroscopic scales will be highlighted. Theory of general stereology including the determination of number, connectivity, length, surface, and volume using microscopy and other bioimaging techniques; Optimization of multistage designs; Computer-assisted stereology and software.

The course is an intense 3-day learning experience, which includes lectures and hands on exercises each day. Lectures on each topic will be followed by hands-on exercises. Participants are encouraged to present their own projects for discussion.

## Preliminary Program

### Wednesday 18

11.00 - 12.00	Arrival and registration.
12.00 - 12.45	Lecture: Definition of probes, sampling and basic statistics
12.45 - 13.30	Lecture: Volume estimation, Cavalieri principle
13.30 - 14.30	Exercise: Volume estimation
14.30 - 16.00	Lunch
16.00 - 16.45	Lecture: The fractionator principle (systematic sampling)
16.45 - 17.45	Exercise: The fractionator
17.45 - 18.15	Coffee
18.15 - 19.00	Lecture: The disector, counting and sampling in 3D
19.00 - 20.00	Exercise: Number estimation
21.00	Get-together-dinner

### Thursday 19

09.00 - 09.45	Lecture: Length and Surface, IUR
09.45 - 10.45	Exercise: Length estimation
10.45 - 11.15	Coffee
11.15 - 12.00	Lecture: Estimation via ratios, multilevel sampling design
12.00 - 12.45	Lecture: How many animals?
12.45 - 14.45	Lunch
14.45 - 15.45	Demonstration of computer-assisted stereology
15.45 - 16.15	Coffee
16.15 - 17.00	Lecture: More disector sampling, including connectivity
17.00 - 18.00	Exercise: Connectivity
19.00 - 21.00	Visit of the modernist building
21.00	Dinner

### Friday 20

09.00 - 09.30	Lecture: Vertical sections
09.30 - 11.00	Exercise: Surface from vertical sections – bananametry
11.00 - 11.15	Coffee
11.15 - 12.00	Exercise: Length from vertical projection – roots
12.00 - 12.45	Lecture: Tissue deformation, slicing, sectioning, tools and gadgets
12.45 - 13.45	Lunch
13.45 - 14.30	Lecture: Sampling and Sizing of particles
14.30 - 15.00	Coffee and evaluation
15.00 - 16.00	Exercise: The nucleator
16.00 - 16.45	Exercise: Point sampled intercept

