



## PhD course in “Molecular marker analysis of plant population structure and processes”

**Copenhagen 22-08-2011 - 26-08-2011**

The course provides participants with practical and theoretical knowledge on analysis of genetic population structure, mating patterns, and population processes in plant populations, using molecular marker data. The course includes theoretical lectures, exercises and practicals with various computer programmes as well as discussions of student projects. The course is taught by staff at University of Copenhagen and other Danish Universities as well as Professor Peter Smouse, Rutgers University, one of the developers of GenAlEx, a widely used software for population genetic analysis.

### **Course content**

Estimation of genetic diversity, F-statistics, inbreeding level, gene flow, population and paternity assignment, population admixture, hybridization. Assumptions and limitations of methods, and practical exercises with relevant computer programmes, such as: GenAlEx, Structure, Cervus, Two-gener, Population Graph, Geneland, Split tree, New Hybrids, AFLPOP, GeneClass2. Exact which programmes that will be used is to be decided. Discussion of selected student projects.

### **Course credit**

3 ECTS points. Requirement for obtaining credit: approval of a written synopsis of the course content.

### **Course material**

Articles and lecture notes. All course material will be available through a restricted web site.

### **Practical information**

Maximum number of participants is twenty. PhD students have preference, remaining ‘seats’ are open to non-PhD students. The course will take place at University of Copenhagen, Frederiksberg Campus (within Copenhagen). Computers with the relevant software will be available for all.

*Travel, lodging, and accommodation are to be organised and paid by the participants themselves; suggestions for hostels and hotels will be posted on the web.*

**Course fee: 150 Euro**

### **Organisers and teachers**

Ole K. Hansen, Associate Professor in Forest Genetics; Erik D. Kjær, Professor in Forest Genetics, Thure Hauser, Associate Professor in Plant Ecology; Gunter Backes, Associate Professor in Plant Breeding; Peter Smouse, Professor in Ecology, Evolution and Natural resources.

### **Registration and questions**

Write an e-mail to Ole Hansen, [okh@life.ku.dk](mailto:okh@life.ku.dk), containing the following information: Full name, e-mail address, phone no., institution, full mailing address, country, whether you are a Ph.D. student, title of present research project, education in genetics (courses + experience) and whether you would like to present your project during the course; **in that order and on separate lines.**