



Prof. Dr. Henner Simianer
Animal Breeding and Genetics

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Course Announcement

Methods for Assessing Molecular Diversity in Farm Animals

April 4-8, 2011

- In the scope of PAG Module 0060 'Advanced methods in animal breeding and statistical genetics' -

Lecturers:

- Dr. Steffen Weigend - Institute of Farm Animal Genetics, Friedrich-Loeffler-Institut; Neustadt-Mariensee
- Dr. Georg Haberer - MIPS/IBIS Institute of Bioinformatics and Systems Biology, Helmholtz Zentrum München
- Prof. Henner Simianer - Animal Breeding and Genetics Group, Department of Animal Sciences, Georg-August-University Göttingen

Course outline:

- Apr 4 Introduction, molecular markers, Sanger sequencing, alignment (Weigend)
- Apr 5 Next Generation Sequencing, Blast, de novo assembly, SNP detection (Haberer)
- Apr 6 Measures of genetic diversity, F - statistics, distance measures, marker-based kinship (Weigend)
- Apr 7 Phylogenetic structure, tree building, model based clustering (Weigend)
- Apr 8 Linkage disequilibrium, estimation of effective population size, haplotype reconstruction and imputing, selection signatures and selective sweeps (Simianer)

All lectures will be accompanied by practical exercises with relevant software tools.

Place: Department of Animal Sciences, Albrecht-Thaer-Weg 3, Göttingen

Registration: Participation is free for students enrolled at Georg-August-University, external participants will be charged a small course fee to cover expenses. The number of participants is limited to 30, applications will be accepted in the order of receipt.

Please register before **21. 3. 2011** by email to tierzucht@agr.uni-goettingen.de

For further information please contact hsimian@gwdg.de