Title of Course:

Modular advanced practical in the focal point programme "Molecular Medicine",

VZ: 209 806 / 209 852

"***HLA-D Typing and LightCycler Applications***"

Type: Compulsory Course			**Workload** 120h	**Intended for Semester** 1	**Duration** 2 weeks
1	**Module:** Elective Practical		**Hours per Week** 5.25	**Self-study** 46,5 h	**Credit Points** 4
2	**Teaching Methods:** a) A two-week all-day practical lab course with an integrated seminar				
3	**Group Size:** *1-3*				
4	**Learning/Course Objectives:** Students will isolate their own genomic DNA from an EDTA blood sample and buccal swabs and learn to perform different molecular biology techniques to determine their *HLA-D* and acetylation status, as well as some single nucleotide polymorphisms (SNPs).				
5	**Contents:** During the first part, the module focuses on the determination of *DRB1* and *DQB1* alleles in the genomic DNA of the student's own blood samples and own buccal swabs. In the second part the DNA from both sources will be used to analyze certain SNPs with two different techniques. Finally, students will perform a deduction of the *NAT2* acetylation status by analyzing seven SNPs using a combination of sequencing and/or real-time PCR on a LightCycler system.				
6	**Degree Courses:** Master of Science Biochemistry				
7	**Prerequisite(s):** Knowledge of basic methods in molecular biology and protein chemistry.				
8	**Method(s) of Examination:** Assessment of active and successful participation in the practical (50%) and a written project report (50%)				
9	**Requirements for Acquiring Credit Points:** Achievement of at least the mark "sufficient" regarding the above modes of examination.				
10	**Significance for Overall Grade:** Weighted according to CPs				
11	**Frequency:** Every winter term				
12	**Lecturer(s):** H.-P. Rihs, T. Brüning				
13	**Additional Information:** This lab course is one of four courses in total to be completed in the first term, which have to be fulfilled in different Focal Point Programs				