

Title of module

Modular Advanced Practical and Seminar
in the Focal Point Programme
"Molecular Medicine" VZ: 185780, 183781
" Molecular Pathology"

Credit points

4

Available in semester(s)

1

Hours per week

5.25

**Compact course +
seminar**



Lecturer(s)

A. Tannapfel and teaching assistants

Teaching methods

A two-week all-day practical lab course with a compulsory seminar presentation.
Please note: Three other Practical Courses will have to be performed in the same semester to earn the full complement of 16 credits

**Evaluation of learning
progress**

Active participation, feedback during independently performed experiments, project discussions with the supervisor

Mode of examination

Evaluation of successful completion of course will be based on seminar presentation of experimental results (60%), a *viva voce* examination (20%) and submission of a written project report (20%).

Learning objectives

After completing this course the student will acquire an intensive hands-on experience in different techniques to analyze DNA mutations and epigenetic modifications. Intensive training in bisulfite conversion of gDNA, pyrosequencing based quantitative positional methylation analysis and *in vitro* methylation will also be imparted.

Soft skills

Development of both written and oral scientific presentation skills and collaborative team work.

Contents of module

- DNA-Extraktion
- Mutation analysis
 - a. HRM-analysis
 - b. Sangersequencing
 - c. Pyrosequencing
- Promotor-Methylation analysis:
 - a. Pyrosequencing
 - b. MSP-Analysis