

# Course

## >Viral Gene Transfer<

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<i>Lecturer</i>	<b><i>Ritsch A</i></b>
<i>Number</i>	049509
<i>Type / ECTS</i>	<i>PR 2 / 1,5 ECTS</i>
<i>Date/Time</i>	<i>tba</i>
<i>Location</i>	<i>tba</i>
<i>Limitations</i>	<i>Min. of 4 participants; Max. of 6 participants</i>
<i>Registration</i>	<i>Register in i-med.inside (Deadline Feb 28)</i>

### Scope

- Knowledge and Practice of gene transfer methods
- Working with viral vectors (Isolation, characterization, quantification)
- Working with biological hazards (Safety level 2)

### Vectors

- Adeno-associated viral particles (AAV)
- Lentiviral particles (LV)
- Naked DNA

### Program

- Production (Helper-free system, HEK293 cell culture)
- Isolation and purification of viral vectors (Affinity Chromatography, Ultracentrifugation)
- Quantification of viral vectors (Real Time PCR)
- Characterization (FACS-Analysis, Fluorescence Microscopy, Infectivity)
- Cell specific expression (Nucleofection, Luciferase Activity)
- Preparation of Total RNA and Whole-cell extracts