

The Molecular Medicine Partnership Unit

Teaching

From bench to bedside - and back

Schedule WS 2011/12

- 11.10.11 **Organisation**
- 18.10.11 **Introduction I:** Nuclear and cytoplasmic mechanisms of gene expression
- 25.10.11 **Introduction II:** Mechanisms of inheritance, Genotype-Phenotype correlations, human genetics
- 08.11.11 **Molecular Pathogenesis I**
Thalassemias: Nonsense mediated mRNA decay (*NMD*) – modifier of disease phenotype
Breast cancer & metastasis: *miRNAs* and their role in human disease
- 15.11.11 **Molecular Pathogenesis II**
Beckwith-Wiedemann-Syndrome: phenotypic plasticity and *epigenetics* of human disease
- 22.11.11 **Animal models in Molecular Medicine I**
Introduction, transgene, knockout, knockin animals, conventional, conditional, regulated gene targeting
- 29.11.11 **Animal models in Molecular Medicine II**
Animal Models to study the pathogenesis and treatment of human disorders (i.e. in zebra fish)
- 06.12.11 **Molecular Diagnostics I**
Introduction in aims, methods, applicability, prospects, limitations
Up-to-date example i.e. cytochrome p450 genetics and drug metabolism
- 13.12.11 **Ethics:** Panel discussion - pros and cons on an actual topic
- 20.12.11 **Molecular Diagnostics II**
genetic profiling in cancer, social consequences of predictive testing
- 10.01.12 **Molecular Therapy I**
Introduction in aims, methods, applicability, prospects and limitations, siRNAs/miRNAs and their therapeutic application
- 17.01.12 **Molecular Therapy II**
Small compounds: Rationale, strategy i.e. Gleevec[®]
- 24.01.12 **Molecular Therapy III**
Antibodies as therapeutics, recent advances in treating Psoriasis
- 31.01.12 **Final Discussion, evaluation**

Teachers:

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