

Biophysics of biological macromolecules (HS 11)

HPK H10, Monday 17⁴⁵–18³⁰

Student presentations

Tutors: Dr. Mario Schubert (MS), Dr. Peter Lukavsky (PL), Prof. Dr. Gerhard Wider (GSW)

- 17.10. Ekaterina Kuznetsova (GSW) - **NMR Spectroscopy** [copy paper]
- 31.10. Levy Jäger (MS) - **PCR (Polymerase chain reaction)**
[paper Burkhardt/Paeusser & Gibbs (pdfs available)]
- 7.11. Sevada Hovsepyan (MS) - **Edman degradation** [T.E. Creighton (1993) Proteins: Structures and Molecular Properties (2nd edition). p33-35; L. Stryer (1995) Biochemistry (4th ed.) p. 53-56, beide als pdf verfügbare
<http://pdtc.rockefeller.edu/Edman/Edmaninfo.html>]
- 14.11. Manuel Schneider (MS) - **Isothermal titration calorimetry (ITC)**
- 21.11. Peggy Schönherr (PL) - **Der genetische Code** [K 78-84] [L 1114-1119, L 1122-1124]
- **Mutationen** - ein Überblick [K 250-256] [L 14-16]
- 5.12. Alexandra Mannig (PL) - **Internal ribosome entry site (IRES) RNAs: mechanism of translation initiation**
- 12.12. Markus Legner (PL) - **DNA sequencing** (Dideoxy-sequence, Sanger method, new methods in DNA sequencing
[K 304-310, LZ 777-794, Stryer 146-148]
- **Genkarten und Genomik** [K 479-485]

Material for the preparation of the seminars:

[K]: "Molekular Genetik", R. Knippers, 9., neubearbeitete Auflage, Georg Thieme Verlag, 2006
ISBN 3-13-477009-1

[LZ]: "Bioanalytik", F. Lottspeich und H. Zorbas (Hrsg.), 8., neubearbeitete Auflage, 1998, Spektrum Akademischer Verlag GmbH. ISBN 3-8274-0041-4

[L]: „Prinzipien der Biochemie“, Lehninger, Nelson, Cox: *Lehninger Biochemie*. 3. Auflage. Springer-Lehrbuch, Berlin 2001, [ISBN 354041813X](https://www.amazon.de/dp/354041813X)

[G]: "Spektroskopische Methoden in der Biochemie", 1988, Georg Thieme Verlag. ISBN 3-13-712301-1

The literature indicated shall be used for the preparation of the seminars. The students prepare the topics and present them in a seminar of 20-25 min. duration. The topics covered in [K] are part of the final exam.

GSW, 11/10/11