

## Schedule of AK-Ulrich Group Meeting in Val d'Ajol, France, 19-22 August 2019

| Time  | Monday 19/8  | Tuesday 20/8   | Wednesday 21/8   | Thursday 22/8  |
|-------|--|--|--|--|
| 8.00  |  | Breakfast  | Breakfast  | Breakfast  |
| 9.00  | 9.00 Bus from Karlsruhe  | <b>Session 3. PELICO I (Erik)</b><br>Igor <i>Three years of PELICO: current achievements and prospects</i><br>Kateryna Tolmachova <i>Light-controllable antibody-peptide conjugates (LC-APC)</i><br>Andrii Hrebonkin <i>Spiropyran based photoswitchable building block</i>  | <b>Session 7. Water (Lena)</b><br>Torsten <i>Introduction to structured water</i><br>Alexander <i>The theory behind the "Exclusion Zone" - how to explain this phenomenon</i><br>Lakshmi <i>Experimental investigation of the "Exclusion Zone" and "Iteratively Nafionized Water"</i><br>Frauke <i>The importance of water on cell biology</i> | <b>Session 9. Pinholins (Sergii)</b><br>Lena <i>Introduction to pinholins</i><br>Anne G <i>Structure of pinholins</i><br>Annika <i>Function of pinholins</i>   |
| 10.30 |  | Discussion and coffee  | 11.00 Discussion and coffee  | 10.30 Discussion and coffee  |
| 11.00 |  | <b>Session 4. PELICO II (Tomas)</b><br>Aigars Jirgensons <i>Peptidomimetic inhibitors of plasmodium serine protease SUB1: from scratch to antimalarial leads</i><br>Illia <i>Peptide inhibitors of acid-sensing ion channels</i><br>Oleg <i>Photocontrol of enzymatic activity: diarylethene-based photoswitchable analogues of a potent Bowman-Birk protease inhibitor SFTI-1</i> | <b>11.30 Session 8. Lipids and local anaesthetics (Oleg)</b><br>Stephan <i>Lipid force</i><br>Anke <i>Membrane activity of local anaesthetics</i>  | <b>Session 10. TMHs (Stephan)</b><br>Tomáš Kubař <i>Simulation of proton transfer in transmembrane proteins / peptides</i><br>Sebastian <i>Membrane orientation of the EGFR-TMD</i><br>Li <i>Self-assembly of receptor transmembrane helices in membranes studied by solid state NMR</i><br><b>THE END</b> |
| 12.30 |  | Project discussion   | Project discussion   | Project discussion   |
| 13.00 | Lunch  | Lunch  | Lunch  | Lunch  |
| 15.00 | <b>Session 1. Introduction + AMPs (<math>\alpha</math>) (Chair: Birgid)</b><br>† Anne <i>Welcome and introduction</i><br>† Erik <i>Seminar information</i><br>Jochen <i>Unveiling the binding, conformation and orientation of plantaricin 149a in model membranes</i><br>Erik <i>Design principles and mechanisms of action of AMPs</i><br>Patrick A <i>Fine-tuning the sequence of KIA21</i> | <b>Session 5. PELICO III (Jochen)</b><br>Serhii K <i>Fluorescent amino acids with a 3-hydroxychromone core and their use in peptide investigations</i><br>Sergii A <i>Fish embryo-toxicity assay for (photo)pharmacology of bioactive peptides</i><br>Beibei <i>In vivo imaging of nanoparticles and development of fluorine-rich labels</i>                                       | Walk or activities   | 14.30 Bus to Karlsruhe   |
| 16.30 | Discussion and coffee  | Discussion and coffee  |  |  |
| 17.00 | <b>Session 2. AMPs (<math>\beta</math>) (Igor)</b><br>Réka <i>Lipid effects on vesicle binding and leakage of AMPs</i><br>Fabian <i>Influence of N-methylation on membrane binding and therapeutic properties of KL peptides</i><br>Arnold <i>Influence of backbone modification of decapeptides composed of alternating polar/non-polar residues on structural and functional properties</i>  | <b>Session 6. PELICO IV/CPP (Torsten)</b><br>Eileen <i>Cyclic peptides with photoswitchable conformation as cellular transporters</i><br>Tim <i>Taming the chameleon! With uncharged weapons?</i>  |  |  |
| 18.30 | Project discussion   | 18.00 Project discussion   |  |  |
| 19.00 | Dinner   | Dinner   | Dinner   | Last updated 190808  |

Talks: Seniors, postdocs, master students, bachelor students (20 min talk + 10 min questions), † very short talk (5 min)