- 12.20 Learning from nature: Metalloproteases and their impact on pathogenicity/virulence in fungi Eckhard Thines, Mainz
- 12.50 GARP enhances TGF-beta activability - molecular mechanism and proteolytic regulation Sven Friedrich, Mainz

13.10 Lunch

- 14.00 Protease inhibitors: From bench to bedside - hurdles and strategies Nisar Malek, Tübingen
- 14.30 Role of the stream protease FAP-alpha in shaping the tumor microenvironment Oliver Schilling, Freiburg
- 15.00 Bioinformatics in (protease) research: Potential and impact Andreas Hildebrandt, Mainz
- 15.30 Nanoparticle-based targeting of Taspase 1 - a new principle Johannes van den Boom, Essen
- 15.50 Proteases as biotools to modify surfaces Thomas Hering, Kaiserslautern
- 16.05 Learning from viruses: Allosteric inhibitors of Dengue virus protease Franziska von Hammerstein. Mainz
- 16.25 Proteolytic antigen processing in the MHC class I pathway determines CTL immuno-dominance Stefan Tenzer, Mainz

## Lageplan

Universitätsmedizin Mainz



Geb. 102 / EG H1-404, großer Hörsaal der HNO-Klinik

**Universitätsmedizin** der Johannes Gutenberg-Universität Mainz, Langenbeckstr. 1, 55131 Mainz

Auf unserer Homepage www.unimedizin-mainz.de finden Sie Anfahrtsskizzen sowie mögliche Busverbindungen.

Chem





December 12 & 13, 2014

### ChemBioMed IV - Proteases from Basic Mechanisms to Tumor Biology

# Learning from Nature and from Rational Design

Unser Wissen für Ihre Gesundheit



#### December 12 & 13, 2014

## ChemBioMed IV -From Basic Mechanisms to Tumor Biology

#### Dear colleagues,

our meeting focuses on three main topics: proteases, cancer and natural products. Proteolysis is not only a critical requirement for life, but proteases are also key enzymes for numerous pathological conditions, including cancer. Therefore, proteases are of academic and clinical interest, and also important drug targets for industry. However, to effectively modulate proteases, a profound knowledge of their mechanistic function, as well as of the involved pathways in health and disease are required. In this respect, natural products are an important source of potentially antiproteolytic drugs, however only a small fraction has been utilized so far for therapeutic purposes. Albeit their chemical complexity poses challenges regarding synthesis, it is this complexity, which also confers unique biological properties.

Consequently, we invite you to join lectures covering innovative targets, novel mechanistic and experimental aspects, as well as new compounds from both nature and rational design.

As in the previous years, our meeting addresses researchers from medicine, chemistry, pharmacology, biology, chemo- and bioinformatics - sharing an interest in the interdisciplinary field of protease research. Join us in Mainz to 'learn from nature and rational design', bring in young colleagues to start transdisciplinary collaborations to more successfully exploit this exciting reservoir in the future.

With best regards, Tanja Schirmeister, Roland Stauber, Walter Stöcker

Friday, December 12th	
12.00	Welcome-Lunch
13.00	Introduction
13.15	<b>Chemical Oncology</b> Daniel Rauh, Dortmund
13.45	<b>Fungal Endophytes as Sources for</b> <b>New Bioactive Compounds</b> Peter Proksch, Düsseldorf
14.15	Development of cyclic plasmin inhibitors with excellent potency, selectivity and antifibrinolytic activity Torsten Steinmetzer, Marburg
14.45	The marine compound cyclotheonamide E4 as nature's blueprint for tryptase inhibitors Norbert Schaschke, Aachen
15.15	Coffee break
15.50	Synthesis and biological evaluation of protease-targeting natural products Markus Kaiser, Essen
16.20	Transactivation of EGFR in colorectal cancer by meprin alpha Christoph Becker-Pauly, Kiel
16.50	<b>MMP-12 in atherosclerosis: a target for drug delivery</b> Vincent Dive, Paris

17.20	Trying to catch the 20S proteasome b5 subunit with a mouse trap Boris Schmidt, Darmstadt	
17.50	From fly to man - Taspase 1 as a model for protease evolution? Desirée Wünsch, Mainz	
19.00	Dinner (Kupferbergterrasse)	
Saturday, December 13th		
09.15	Current and Future Trends in Proteasome Drug Development Michael Groll, München	
09.45	Protease problem? Bioinformatics helps: Computational study of protein interaction networks Miguel Andrade, Mainz	
10.15	A succinimide-driven peptide ligase in the cysteine protease legumain: mechanism and relevance	
10.45	Proteases in Cancer Progression Christoph Peters, Freiburg	
11.15	Coffee break	
11.50	<b>Intramembrane proteolysis</b> Marius Lemberg, Heidelberg	