

SYMPOSIUM PROGRAMME

Saturday, September 17

- From 17:00 Registration
- 18:15 – 20:00 DINNER
- 20:00 – 20:15 Opening of the symposium
- 20:15 – 21:00 **EMBO Keynote lecture** [Chair: Boris Turk]
CARLOS LOPEZ-OTIN: Cancer and ageing through the
lens of proteolysis
- 21:00 – 23:00 GET-TOGETHER

Sunday, September 18

Programmed Necrosis Pathways and Inflammation

[Chair: Hans-Uwe Simon]

- 09:00 - 09:25 GUY SALVESEN: Proteolytic crosstalk in inflammatory
cell death
- 09:25 - 09:50 MOHAMED LAMKANFI: Regulation of inflammasome
activation in inflammatory disease
- 09:50 – 10:15 PETER VANDENABEELE: Regulation of the core
necroptosis pathway by nuclear events
- 10:15 – 10:45 COFFEE BREAK

Allergy and Inflammation

[Chair: Mohamed Lamkanfi]

- 10:45 – 11:10 HANS-UWE SIMON: Mechanism of eosinophil cytolysis
- 11:10 – 11:35 GUNNAR PEJLER: Tryptase-catalyzed core histone truncation: a novel epigenetic regulatory mechanism in mast cells
- 11:35 – 12:00 GILLES LALMANACH: Cysteine cathepsins and cystatin C: a lopsided relationship during human pulmonary fibrosis
- 12:00 – 12:15 TINA ZAVAŠNIK BERGANT: Salivary tick cystatin OmC2 targets cathepsin S and cathepsin C in dendritic cells
- 12:15 – 12:30 NATAŠA KOPITAR JERALA: The role of cystatin C in inflammation and endotoxemia

Sponsor talk

- 12:30– 13:00 MAREK ZURAWSKI (NanoTemper Technologies): Biomolecular interaction analytics using Microscale Thermophoresis
- 13:00 – 14:30 LUNCH BREAK

Engineerig Proteases and Inhibitors

[Chair: Marcin Drag]

- 14:30 – 14:55 DANIEL KIRCHHOFER: Antibodies against the trimeric serine protease HtrA1 for treatment of ocular disease
- 14:55 – 15:20 JAMES HUNTINGTON: An engineered serpin for the treatment of haemophilia
- 15:20 – 15:45 ROBERT LAZARUS: Dual functionality of tryptase protomers
- 15:45 – 16:10 DIETER BROMME: Selective inhibition of the collagenase and elastase activities of cathepsins
- 16:10 – 16:30 COFFEE BREAK

Inhibitor Cocktail

[Chair: Dušan Turk]

- 16:30 – 16:55 JAN POTEPA: New kids on a block: Let meet Potempins, an extraordinary family of protease inhibitors
- 16:55 – 17:20 ROBERT PIKE: The structural basis for complement inhibition by Compstasin, a protease inhibitor from the giant Amazon Leech
- 17:20 – 17:45 F. XAVIER GOMIS-RUTH: Endopeptidase inhibition by α 2-macroglobulins: Venus-flytrap or snap-trap mechanisms?
- 17:45 – 18:10 WALTER STOECKER: Control of Proteolysis by Plasma Fetuins
- 18:10 – 20:00 DINNER
- 20:00 – 21:30 POSTER SESSION I

Monday, September 19

Proteases in Neuronal System

[Chair: Janko Kos]

- 09:00 – 09:25 HIROSHI NAKANISHI: Pathological roles of microglial cathepsins in chronic pain
- 09:25 – 09:40 ZHOU WU: Cathepsin B, a novel therapeutic target for microglia-aging
- 09:40 – 09:55 VERONIKA STOKA: Cathepsin F and its role in Neurodegeneration
- 09:55 – 10:20 HANS-ULRICH DEMUTH: Meprin β is associated with formation of pyroglutamate-modified A peptides in situ
- 10:20 – 10:35 TAISUKE TOMITA: Identification of kallikrein-related peptidase 7 as a novel amyloid- β peptide-degrading protease secreted from astrocyte.
- 10:35 – 11:00 COFFEE BREAK

Protease potpourri

[Chair: Walter Stoecker]

- 11:00 – 11:25 MARGARETE HECK: Invadolysin: from “ugly chromosomes” to serum protease
- 11:25 – 11:50 JOHANN BRANDSTETTER: X-ray structure of a plant legumain reveals a pH-dependent activation switch
- 11:50 – 12:05 DUŠAN TURK: How can cysteine cathepsins with hampered potency assist in delivery
- 12:05 – 12:20 EVA ŽEROVNIK: Stefin B as a model protein in vitro and in the cell; can we propose its alternative function?

Sponsor talk

- 12:20 – 12:50 RONALD COOP (Perkin Elmer): “In Vivo Optical Imaging of Protease Activity”
- 12:50 – 15:00 LUNCH BREAK

How to Tackle Proteases in Action I.: Imaging Protease Activities

[Chair: Bonnie Sloane]

- 15.00 – 15.25 MARCIN DRAG: Libraries of fluorogenic substrates with natural and unnatural amino acids as a tool in design of active and specific probes for investigation of proteolytic enzymes
- 15:25 – 15:50 GALIA BLUM: Novel methods to study cathepsin localization and function during autophagy and cell cycle
- 15:50 – 16:15 BORIS TURK: Imaging cathepsins: from cells to in vivo diagnostics
- 16:15 – 16:30 COFFEE BREAK

How to Tackle Proteases in Action II.: Proteomics and Imaging

[Chair: Guy Salvesen]

- 16:30 – 16:55 KRIS GEVAERT: Methionine aminopeptidases impact on protein stability
- 16:55 – 17:10 ROBERT VIDMAR: Protease cleavage site fingerprinting using label-free in-gel degradomics
- 17:10 – 17:35 BONNIE SLOANE: Pathomimetic Cancer Avatars for Live-Cell Imaging of Proteolytic Pathways
- 17:35 – 18:00 JAN KONVALINKA: Protease- inhibitor conjugates as a tool for cell imaging, enzyme quantification and drug discovery
- 18:00 – 20:00 DINNER
- 20:00 – 21:30 POSTER SESSION II

Tuesday, September 20

Proteolytic Pathways in Cancer I

[Chair: Christoph Peters]

- 09:00 – 09:25 THOMAS REINHECKEL: The Cancer Degradome Revisited: New Data, New Tools, New Insight
- 09:25 – 09:40 LARISSA HILLEBRAND: Dynamic protease expression during phenotypic plasticity of tumor- initiating breast cancer cells
- 09:40 – 10:05 CHRIS SCOTT: Cathepsin S: A therapeutic target in breast cancer?
- 10:05 – 10:45 COFFEE BREAK

Proteolytic Pathways in Cancer II

[Chair: Thomas Reinheckel]

- 10:45 - 11:10 TAMARA LAH TURNŠEK: Cathepsin K inhibits the chemotactic activity of SDF-1 α towards glioblastoma stem-like cells in vitro
- 11:10 – 11:25 CHRISTOPH PETERS: Cathepsin B controls the level of the tumor-suppressing glycoprotein CREG1
- 11:25 – 11:50 JANKO KOS: Cystatin F as regulator of cell cytotoxicity and antitumor immune response
- 11:50 – 12:15 YASUHIKO OZAKI: Role of matrix metalloproteinase-2 and 9 in pathogenesis of patients with recurrent pregnancy loss
- 12:15 – 20:00 LUNCH AND FREE AFTERNOON
- 20:00 – 24:00 GALA DINNER

Wednesday, September 21

HOTEL CHECK-OUT & DEPARTURE