

2. Symposia program

Decoding Microproteins-From Basic Biology to Biotechnological Innovations

Day 1: Monday 14/09/2026

8:15-8:45	Registration
8:45-9:00	Opening by Stephan Wenkel
Session 1. Chair: Stephan Wenkel	
9:00-9:30	Gisela Storz (NIH, United States) "Mechanisms of microprotein action"
9:30-10:00	Julie Aspden (University of Leeds, United Kingdom) "What features contribute to translational preference of microprotein encoding transcripts"
10:00-10:30	Anne Lopes (Université Paris-Saclay, France) "Emergence of microproteins and de novo genes from noncoding DNA"
<i>Break (30 min)</i>	
Session 2 Chair: Iker Valle Aramburu	
11:00-11:30	Brendan Miller (Salk Institute for Biological Studies, United States) "Microproteins Hiding in Plain Sight: From Dark Proteome to Functional Biology"
11:30-12:00	Claire McWhite (The University of Arizona, United States) "Alternative proteoforms and proteoform-dependent assemblies in humans and plants"
12:00-12:30	Cynthia Sharma (University of Würzburg, Germany) "Small proteins in stress response and virulence of pathogenic Epsilonproteobacteria"
12:30-13:30	<i>Lunch + poster session</i>
Session 3 Chair: Mar Albà	
13:30-14:00	Ami S. Bhatt (Stanford Medical School, United States) "A New Molecular Vocabulary for Host-Microbe Communication"
14:00-14:30	John Prensner (University of Michigan Medical School, United States) "Next steps for the detection and characterization of the cancer dark proteome"
14:30-15:00	Klára Hlouchová (Charles University, Czech Republic) "Learning from random sequence space"
15:00-16:00	<i>Coffee + poster session</i>
Session 4 Chair: Amelie Stein	
16:00-16:30	Juan Pablo Couso (Centro Andaluz de Biología del Desarrollo, Spain) "Enhanced translation of small ORFs provides resilience to stress"
16:30-17:00	Arne Elofsson (Stockholm University, Sweden) "Towards a complete human interaction map"
17:00-17:30	Matthias Mann (Max Planck Institute of Biochemistry, Germany) "MS-scan modes and algorithms to explore the deep and dark proteome"

Arrival to bildmuseet at 18:30h, dinner after the visit

Day 2: Tuesday 15/09/2026

Session 5 Chair: Simon Elsässer

9:00-10:00 (10+2 per speaker)	Amelie Stein (University of Copenhagen, Denmark) "Frontiers of modelling miniprotein interactions"
	Iker Valle Aramburu (Umeå University, Sweden) "Exploring the dark proteome in fungi and host-pathogen interactions"
	Mar Albà (Hospital del Mar Research Institute, Spain) "Emergence of microproteins throughout evolution"
	Simon Elsässer (Freiburg University, Germany) "A deep dive into microprotein interactomics"
	Stephan Wenkel (Umeå University, Sweden) "Plant Microproteins"
10:00-10:30	José Luis Riechmann (Centre for Research in Agricultural Genomics, Spain) "Short open reading frame-encoded peptides in Arabidopsis: the plant non-conventional peptidome"

Break (30 min)

Session 6 Chair: Amelie Stain

11:00-11:30	Valerie Tornini (University of California, Los Angeles, United States) "Emergence of microproteins in vertebrate neurodevelopment"
11:30-12:00	Maria Abad (Altos Labs, United Kingdom) "The Adaptive Microproteome: How Stress-Induced Microproteins Shape Cellular Plasticity"
12:00-12:30	Lena Ho (A*STAR's Institute of Medical Biology, Singapore) "Towards a (more) Comprehensive Understanding of Microproteins in Mitochondrial Metabolism"

12:30-13:30 *Lunch*

Session 7 Chair: Stephan Wenkel

13:30-14:00	Cyril Zipfel (University of Zürich, Switzerland) "Roles and perception mechanisms of plant stress-regulated secreted signaling peptides"
14:00-14:30	Nikos Vakirlis (Hellenic Pasteur Institute, Greece) "Evolution of antimicrobial peptide novelty and diversity in metazoa"
14:30-15:00	Michal Bassani-Sternberg (Ludwig Institute for Cancer Research, United States) "Shared HLA-I-presented microproteins and non-canonical peptides linked to transposable element activation in ovarian cancer"
15:00-15:30	Dek Woolfson (University of Copenhagen, Denmark) "From peptides to proteins to new functions by design"

Break (30 min)

Session 8 Chair: Mar Albà

16:00-16:30	Patrick Bryant (Stockholm University, Sweden) "Beyond binders: design of functional next-generation peptides"
16:30-17:00	Owen Rackham (University of Southampton, United Kingdom) "A data-driven expansion of the smORF universe"

17:00-17:30 | **Jonathan Weissman** (MIT, Whitehead Institute for Biomedical Research, United States)
"Exploring the dark proteome: from discovery to impact"
Conference dinner

Day 3: Wednesday 16/09/2026

Session 9 Chair: Iker Valle Aramburu

9:00-9:30 | **Erich Bornberg-Bauer** (University of Münster, Germany)
"Why de novo protein coding genes live fast, die young and only the long survive"

9:30-10:00 | **Petra van Damme** (Ghent University, Belgium)
"From Small Translons to Function: Deciphering Bacterial Microproteomes"

10:00-10:30 | **Ylva Ivarsson** (Uppsala University, Sweden)
"Limited Structure, Exposed Motifs, and Potentially Expanding Functions"

Break (30 mins)

Session 10 Chair: Mar Albà

11:00-11:30 | **Jean-Philippe Combier** (Centre national de la recherche scientifique, France)
"IA-based identification of peptides inhibiting protein activities "

11:30-12:00 | **Jennifer Zanet** (Centre de Biologie Intégrative, France)
" Functions of microproteins in Drosophila reproduction"

12:00-12:30 | **Anne-Ruxandra Carvunis** (ETH Zürich, Switzerland)
"from scratch to function: how microproteins promote evolutionary innovation"

12:30-13:30 | *Lunch*

Session 11 Chair: Simon Elsässer

13:30-14:00 | **Norbert Hübner** (Max-Delbrück-Center for Molecular Medicine, Germany)
"Investigating function of emerging microproteins using CRISPR and PERTURB-SEQ screens"

14:00-14:30 | **Thomas Martinez** (University of California, Irvine, United States)
"Regulation of Ribosome Biogenesis by a Disordered Nucleolar Microprotein"

14:30-15:00 | **Sonia Chothani** (A*STAR Genome Institute of Singapore, Singapore)
"Mapping human microproteins: From community annotations to cancer-specific discovery"

Break (30 mins)

Session 12 Chair: Stephan Wenkel

15:30-16:00 | **Sarah Slavoff** (Yale University, United States)
"Biochemical and functional characterization of human microproteins"

16:00-16:30 | **Sebastiaan van Heesch** (Princess Maxima Center for Pediatric Oncology, The Netherlands)
"Microproteins in pediatric cancer"

16:30-16:45 | *Closing by Stephan Wenkel and University Leadership*

We have kept the time distribution flexible. If you present work that you would like to have a longer discussion, you can opt for 20+10. If you prefer to speak longer, you can opt for 25+5, but we might have to cut the discussion. We will stop speakers after 25'.

4. Poster list:

#	Poster Presenter	Poster title
1	Abha Gupta	The "coding" long, non-coding RNAs in Ovarian Cancer.
2	Alessia Del Piano	Multidimensional Translatome Profiling: An Integrated Framework for Decoding Translational Regulation
3	Amit Bhatt	Unleashing the Hidden Proteome: Scalable Functional Genomics Pipelines from sORF Candidates to Microprotein Function.
4	Anna Birke	Not so NEATly non-coding: a novel nuclear microprotein encoded by the lncRNA NEAT1 modulates DNA replication and cell proliferation
5	Daniel Rebibo	Development and Application of SEER to Nominate MYC-Regulated Microproteins in Burkitt Lymphoma
6	Hélène Chanut	Deciphering the function of Microproteins in secretion and actin dynamics.
7	Jana Schulz	Uncovering the Microproteome of Cellular Reprogramming
8	Kazuma Nakatani	Gene Amplification Drives Non-Canonical ORF Translation in Cancer
9	Kilian Maidhof	PRICE2: joint generative modeling and deconvolution across Ribo-seq datasets resolves overlapping non-canonical ORFs
10	Leron Kok	Differences in cryptic antigen presentation across HLA-I alleles
11	Luuk Broeils	Oncogenic fusions induce an extensive cancer-restricted cryptic proteome in Ewing sarcoma
12	Mahmoud Elkhwanky	Activation of the Nuclear Receptor PXR Remodels the Liver-Derived Circulating Proteome: Linking Environmental Chemicals and Therapeutic Drugs to Metabolic Syndrome
13	Maurizio	A synthetic microProtein acts as dominant flowering regulator in the Arabidopsis CONSTANS family
14	Naiara G. Bediaga	nf-core/ribosseq: An open, reproducible Nextflow pipeline for ribosome profiling (Ribo-seq) analysis
15	Nithya Kruthi	Exploring Small Protein Functionality in Microbial Genomes via Synteny Analysis.
16	Puri Fortes	An epitope vaccine derived from a tumor-shared non-canonical protein induces potent anti-tumor responses in mice
17	Qian Zhao	Decoding Functional Microproteins with Chemical Proteomics
18	Jim Clauwaert	Following the Peptide Evidence Trail: From De Novo Calls to Multi-Omic Support and Genomic Localization
19	Naveen Shankar	An upstream ORF promotes phyB levels to control photomorphogenesis in Arabidopsis
20	Tran Thien Long	Identification of two Zinc Finger miPs, SmurfGuard 1 (SG1) and SmurfGuard 2 (SG2), linking parthenocarpic fruit initiation and development to endoreduplication in tomato
21	Fabio Zaccarini	<i>De novo</i> designed microproteins for sequestering and inactivating transcription factors
22	Ole Østergaard	Evaluation of experimental strategies to detect microproteins in mouse plasma
23	Anup Ram	Dissecting Microproteins in <i>Candida albicans</i> Pathogenesis
24	Rytis Stakaitis	Ribo-seq uncovers unannotated sORFs in mouse neutrophils