

# Scientific Program



Sunday, September 14th

13:00 Registration

15:00 Welcome

## Session I: 15:00 – 17:35

### NAD homeostasis

Chair: Fabio Malavasi & Frances Lund

15:15 Antonio De Flora (Genoa, Italy) Opening lecture

S1-L1 Cross-talk of ectoenzymes, receptors, transporters and ion channels in the modulation of NAD(P)-dependent calcium-regulated cell functions

16:00 Mathias Ziegler (Bergen, Norway):

S1-L2 Pyridine nucleotides - small molecules with a multitude of functions

16:20 Nobumasa Hara (Izumo, Japan):

S1-L3 NAD biosynthesis from nicotinic acid in mammalian cells

16:40 Violeta Mutafova-Yambolieva (Reno, USA):

S1-L4 Emerging role of NAD as a novel neurotransmitter

17:00 Eduardo Lazarowski (Chapel Hill, USA):

S1-L5 Regulated nucleotide release from epithelial cells

17:20 Sandip Patel (London, UK) selected poster presentation I

S1-P4 Isoform-specific targeting of NAD kinase by calmodulin

17:35 End of Session

18:00 Dinner

19:30 Sirpa Jalkanen (Turku, Finland) Evening Lecture

S1-L6 Ecto-enzymes in control of leucocyte traffick

20:30 Wine cellar opens

Monday, September 15th

**eppendorf**<sup>AG</sup>

## Session II: 08:00 – 11:35

### Calcium signalling mechanisms and NAD-metabolites

Chair: Andreas Guse & Hon Cheung Lee

08:00 Hon Cheung Lee (Hong Kong, China):


S2-L1 Structure and functions of human CD38, a multifunctional signalling molecule

- 08:20 Andreas Guse (Hamburg, Germany):  
S2-L2 NAADP: from molecule to therapy
- 08:40 Antony Galione (Oxford, UK):  
S2-L3 The NAADP receptor
- 09:00 Armando Genazzani (Novara, Italy):  
S2-L4 NAD(P) transport across the plasma membrane: is it real?
- 09:20 Coffee break (in front of posters)
- 10:00 Luigia Santella (Napoli, Italy):  
S2-L5 NAADP calcium signalling during starfish oocyte fertilization
- 10:20 Martin Hohenegger (Vienna, Austria):  
S2-L6 NAADP signalling in skeletal muscle
- 10:40 Barry Potter (Bath, UK):  
S2-L7 Chemical Intervention in Ca<sup>2+</sup> Signalling Pathways
- 11:00 Grant Churchill (Oxford, UK):  
S2-L8 Development and use of chemical tools for studying the biological roles of NAADP
- 11:20 Eugen Brailoiu (Philadelphia, USA) selected poster presentation II  
S2-P9 Candidate calcium channels for NAADP
- 11:35 End of Session
- 11:40 Lunch



**Session III: 13:30 – 17:40**  
**NAD signaling via ADP-ribosylcyclases (CD38 & related enzymes)**  
Chair: Mike Jacobson & Antony Galione

- 13:30 Elena Zocchi (Genoa, Italy):  
S3-L1 Abscisic acid and cyclic ADP-ribose are first and second messengers in inflammatory cells and hemopoietic progenitors
- 13:50 Frances Lund (Rochester, USA):  
S3-L2 Lessons from CD38 KO mice
- 14:10 Marie-Jo Moutin (Grenoble, France):  
S3-L3 Evidence for an intracellular cADPR-forming enzyme in brain from CD38-deficient mice
- 14:30 Francis Schuber (Strasbourg, France):  
S3-L4 Schistosoma mansoni NAD-catabolizing enzyme: mechanistic and structural insights for inhibitor design
- 14:50 Coffee break (in front of posters)
- 15:30 Li-he Zhang (Beijing, China):  
S3-L5 Synthesis of biologically active cADPR and NAD mimics

- 15:50 Tim Walseth (Minneapolis, USA):  
S3-L6 The cADPR/CD38 signaling system in smooth muscle
- 16:10 Jaime Sancho (Granada, Spain):  
S3-L7 CD38 signalling in T cells
- 16:30 Fabio Malavasi (Torino, Italy):  
S3-L8 Associations of CD38 with human diseases
- 16:50 Haruhiro Higashida (Kanazawa, Japan):  
S3-L9 CD38 and social brain: Autistic behavior regulated by oxytocin release in a cyclic ADP-ribose -dependent fashion
- 17:10 Mo Ching Lam (Hong Kong, China) selected poster presentation III  
S3-P8 Molecular orientation of CD38
- 17:25 Antje Lohmüller (Becton-Dickinson) sponsor presentation  
Tools to measure T cell signaling events at a single cell level
- 17:40 End of Session
- 18:00 Poster Party 
- 20:30 Wine cellar opens

Tuesday, September 16th



**Session IV: 08:30 – 11:45**  
**NAD signalling via ADP-ribosylation (I mammalian ARTs)**  
Chair: Klaus Aktories & Friedrich Koch-Nolte

- 08:30 Friedrich Koch-Nolte (Hamburg, Germany):  
S4-L1 Structure and function of mammalian ARTs
- 08:50 Michel Seman (Rouen, France):  
S4-L2 NAD-induced T cell death
- 09:10 Anette Braß (Hamburg, Germany):  
S4-P13 ARTs on antigen presenting cells
- 09:25 David Serreze (Bar Harbor, USA):  
S4-L3 ART2 in mouse models of autoimmune diabetes
- 09:45 Coffee break (in front of posters)
- 10:30 Sunna Hauschild (Leipzig, Germany):  
S4-L4 NAD-induced signalling in human monocytes
- 10:50 Maria Di Girolamo (Chieti, Italy):  
S4-L5 Mammalian ADP-ribosyl proteome analysis
- 11:10 Friedrich Haag (Hamburg, Germany):  
S4-L6 Identifying novel target proteins of mammalian ARTs
- 11:30 Eva E. Avila (Guanajuato, Mexico) selected poster presentation IV  
S4-P2 Mono-ADP-ribosyl transferase activity and the possible genes codifying for the enzyme(s) in Entamoeba histolytica

11:45 End of session

12:00 Lunch

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**Session V: 13:30 – 16:40**  
**NAD signalling via ADP-ribosylation (II toxin ARTs)**

Chair: Friedrich Haag & Michel Seman

13:30 Klaus Aktories (Freiburg, Germany):

S5-L1 Structure and functions of insecticidal ADP-ribosyltransferases from *Bacillus sphaericus* and *Photorhabdus/Xenorhabdus* species

13:50 Keiji Wakabayashi (Tokyo, Japan):

S5-L2 The Pierisin-family, a guanine-specific ADP-ribosylating toxin in butterfly

14:10 A. Rod Merrill (Guelph, Canada):

S5-L3 Novel Structures of the *Pseudomonas* ExoA toxin in complex with NAD and eEF2 reveal important new insights into the reaction mechanism for the ADP-ribosyltransferases

14:30 Coffee break

15:10 Joseph T. Barbieri (Milwaukee, USA):

S5-L4 Trafficking and specificity of *Pseudomonas* ExoS

15:30 Mariana Margarit (New York, USA):

S5-L5 Structures of *Salmonella* SpvB and ADP-ribosylated actin

15:50 Fernando Goldbaum (Buenos Aires, Argentina):

S5-L6 Generation of llama single domain antibodies that inhibit an ADP-ribosyltransferase bacterial toxin

16:10 Maria Rosaria Faraone Mennella (Napoli, Italy), selected poster presentation V

S5-P3 A new sight of the ADP-ribosylation reaction in the thermophilic Crenarchaeon *Sulfolobus solfataricus*

16:25 Marc Niere (Bergen, Norway), selected poster presentation VI

S6-P2 Functional analysis of subcellular NAD metabolism by compartment-specific modulation of NAD levels

16:40 End of session

17:30 Social event, bus tour and boat trip with dinner on the Elbe river until 22:30

Wednesday, September 17th

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**Session VI: 08:30 – 12:00**  
**NAD-signaling in intracellular compartments**

Chair: Andreas Ladurner & Antonio De Flora

08:30 Michael Hottiger (Zürich, Switzerland):

S6-L1 Transcriptional regulation of NF- $\kappa$ B-dependent gene expression by Poly(ADP-ribose)polymerases

08:50 Myron Jacobson (Lexington, USA):

S6-L2 Role of NAD derived poly(ADP-ribose) in cell signalling

- 09:10 Fernando Bazan (San Francisco, USA):  
S6-L3 Structure, Mechanism and Evolutionary Design of PARG
- 09:30 John Denu (Madison, USA):  
S6-L4 The Sir2 family of protein deacetylases
- 09:50 Coffee break
- 10:30 Andreas Ladurner (Heidelberg, Germany):  
S6-L5 Chromatin as a receptor in NAD pathways
- 10:50 Daniela Corda (Chieti, Italy):  
S6-L6 CtBP/BARS proteins are ADP-ribosylated by a novel mechanism
- 11:10 Manfred Weiss (Hamburg, Germany):  
S6-L7 The structure and mechanism of ADP-ribosylhydrolases (ARHs)
- 11:30 Joel Moss (Bethesda, USA):  
S6-L8 Participation of the ADP-ribose X-hydrolase (ARH) gene family in diverse signal transduction pathways
- 11:50 Frances Lund (Rochester, USA):  
Farewell and sword ceremony
- 12:00 End of symposium