

The 5th International Conference on

The Hsp90 Chaperone Machine



September 29th to October 3rd, 2010
Les Diablerets, Switzerland

Organizers:

Didier Picard, Geneva, Switzerland

Johannes Buchner, Garching, Germany

Kontaktgruppe für Forschungsfragen



SWISS NATIONAL SCIENCE FOUNDATION



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Overview

Detailed Program

Invited Speakers

Short Talks

Poster List

Abstracts of Posters

Participants

Notes

Wednesday, Sept 29th

Afternoon

19.00

20.15 - 22.00

Arrival and registration

Dinner

Evening session

Thursday, Sept 30th

08.30 - 12.20

12.30

15.30 - 18.00

18.30

20.00 - 22.00

Morning session

Lunch

Afternoon session

Dinner

Poster Session 1

Friday, Oct 1st

08.30 - 11.30

12.00

Early afternoon

17.15 - 18.45

19.00

20.00 - 22.00

Morning session

Lunch

Excursions

Afternoon session

Dinner

Poster Session 2

Saturday, Oct 2nd

08.30 - 12.10

12.30

14.30 - 16.30

17.00 - 19.00

≥ 19.00

Morning session

Lunch

Afternoon session

Special session

Banquet, party

Sunday, Oct 3rd

Before or after breakfast

Departure

Detailed Program

Wednesday, September 29

Evening session (20.15 - 22.00) (chaired by Didier Picard)

- 20.15 Opening remarks by Didier Picard (University of Geneva, Switzerland)
- 20.30 **Rudolf Glockshuber** (ETH Zürich, Switzerland).
Protein folding
- 21.10 **Ineke Braakman** (Utrecht University, Netherlands)
Functional redundancy, saturation, and quality control in the ER
- 21.40 **Yair Argon** (University of Pennsylvania, USA)
Human variants of Glucose Regulated Protein 94 have decreased capacity to support IGF secretion
- 22.00 End of Session

Thursday, September 30

Morning session (08.30 - 12.20) (chaired by Cyrille Garnier)

- 08.30 **Johannes Buchner** (Technische Universität München, Germany)
The organisation and dynamics of the Hsp90 chaperone machinery
- 09.00 **Matthias Mayer** (Universität Heidelberg, Germany)
Conformational dynamics of Hsp90 proteins in interaction with cochaperones

Detailed Program

- 09.30 **Chris Prodromou** (University of Sussex, UK)
Structural basis for the assembly of Hsp90 - Sgt1 - CHORD protein complexes and implications for chaperoning of NLR innate immunity receptors
- 10.00 **Ji-Sook Hahn** (Seoul National University, South Korea)
Nucleotide-dependent assembly of Hsp90 co-chaperones, Chp-1, Sgt1, and Pp5
- 10.20 - 10.50 Coffee break
- 10.50 **Thorsten Hugel** (Technische Universität München, Germany)
C-terminal dimerization is an important part of Hsp90's conformational cycle
- 11.10 **David Agard** (UCSF, USA)
Conformational Dynamics, Structure & Functional Interactions of Hsp90 Chaperones
- 11.40 **Stefan Rüdiger** (Utrecht University, Netherlands)
Interaction of Hsp90 with co-factors and substrates by NMR
- 12.00 **Dan Bolon** (University of Massachusetts, USA)
Systematic fitness analysis of point mutants of Hsp90
- 12.20 End of Session
- Lunch at 12.30
- Afternoon session (15.00 - 18.00) (chaired by Mario Galigniana)
- 15.00 **Susan L. Lindquist** (Whitehead Institute, USA)
Hsp90 empowering evolutionary change

- 15.30 **Judy Frydman** (Stanford University, USA)
Hsp90 dictates the evolution of an RNA virus at the protein and RNA levels
- 16.00 **William Balch** (The Scripps Research Institute, USA)
Managing the Emergent Proteostasis Hsp90 Program in Human Disease
- 16.20 - 16.50 Coffee break
- 16.50 **Patricija van Oosten-Hawle** (Northwestern University, USA)
Tissue-specific activities of Hsp90 in the regulation of development, stress-response, and aging in *C. elegans*
- 17.10 **Klaus Richter** (Technische Universität München, Germany)
The Hsp90 system of *Caenorhabditis elegans*
- 17.30 **Didier Picard** (University of Geneva, Switzerland)
The Hsp90 molecular chaperone machine *in silico*, yeast, mice and breast cancer
- 18.00 End of Session

Dinner at 18.30

Poster session 1 (20.00 - 22.00)
Argon to Lemus-Vergara

Detailed Program

Friday, October 1

Morning session (08.30 - 11.30) (chaired by Yoshihiko Miyata)

- 08.30 **Jill Johnson** (University of Idaho, USA)
Evidence of altered nutrient sensing in Hsp90 mutant cells
- 09.00 **Walid Houry** (University of Toronto, Canada)
The role of Hsp90 and its cofactors in snoRNP assembly
- 09.20 **Jennifer Lachowiec** (University of Washington, USA)
An HSP90 client in a plant steroid hormone pathway
- 09.40 **Adina Breiman** (Tel Aviv University, Israel)
Involvement of Arabidopsis ROF1(FKBP62) and ROF2 (FKBP65) in thermotolerance
- 10.00 - 10.30 Coffee break
- 10.30 **Leah Cowen** (University of Toronto, Canada)
Hsp90 Orchestrates Regulatory Circuitry Governing Fungal Drug Resistance, Development, and Disease
- 11.00 **Maciej Zylicz** (International Institute of Molecular and Cell Biology in Warsaw, Poland)
Hsp90 buffers the conformation and DNA-binding activity of wild-type p53
- 11.30 End of Session

Lunch (or lunch bags) at 12.00

Excursions

Afternoon session (17.15 - 19.00) (chaired by Fabio Falsone)

- 17.15 **Len Neckers** (National Cancer Institute, USA)
Phosphorylation of specific sites regulates Hsp90 function by modulating ATPase activity and Aha1 interaction
- 17.45 **Laura Donlin** (Rockefeller University, USA)
Lysine methylation of Hsp90 regulates skeletal muscle protein stability
- 18.05 **Ahmed Chadli** (Medical College of Georgia, USA)
How the co-chaperone UNC45A regulates the Hsp90 chaperoning machinery
- 18.25 **Chad Dickey** (University of South Florida, USA)
Deconstructing the Hsp90/tau machine reveals important roles for FKBP51 and Cdc37
- 18.45 End of Session

Dinner at 19.00

Poster session 2 (20.00 - 22.00) with coffee
Li to Zierer

Saturday, October 2

Morning session (08.30 - 12.10) (chaired by Theo Rein)

- 08.30 **Brian Freeman** (University of Illinois, USA)
Global functional map of the yeast p23 cochaperone Sba1 reveals extensive nuclear molecular chaperone activities
- 09.00 **Renato Paro** (ETH Zürich, Basel, Switzerland)
Chaperoning epigenetic regulation

Detailed Program

- 09.30 **Jane Trepel** (National Cancer Institute, USA)
Clinical Development of Hsp90 Inhibitors
- 10.00-10.30 coffee break
- 10.30 **Paul Workman** (The Institute of Cancer Research, UK)
Exploiting the dependency of cancer cells on molecular chaperone systems: Progress and challenges in the lab and the clinic
- 11.00 **Brian Blagg** (University of Kansas, USA)
Elucidation and Inhibition of the Hsp90 C-Terminus
- 11.30 **Giorgio Colombo** (Istituto di Chimica del Riconoscimento Molecolare, Italy)
First *in silico* discovery of allosteric inhibitors of molecular chaperones: Selection of new ligands for the C-terminal Domain of Hsp90
- 11.50 **Marc Cox** (University of Texas at El Paso, USA)
A Distinct Class of Nuclear Receptor Alternate Site Modulators (NRAMs) that Target the Regulation of Androgen Receptor by the Cochaperone FKBP52
- 12.10 End of Session
- Lunch at 12.30
- Afternoon session 1 (14.30 - 16.30) (chaired by Robert Matts)
- 14.30 **Utpal Tatu** (Indian Institute of Science, India)
Heat Shock Protein 90 As a Potential Drug Target Against Malaria

- 15.00 **Dylan Pillai** (University of Toronto, Canada)
Activity of novel *P. falciparum* Hsp90 inhibitors in a mouse model of malaria
- 15.20 **Peter Piper** (University of Sheffield, UK)
Engineering Hsp90 for inhibitor resistance
- 15.50 **Zhenhai Gao** (Novartis Institutes for BioMedical Research, USA)
Identification and development of NVP-HSP990, a potent and orally active Hsp90 inhibitor for cancer treatment
- 16.10 **Weiwon Ying** (Synta Pharmaceuticals, USA)
Discovery and Development of the Novel Hsp90 Inhibitor STA-9090
- 16.30-17.00 coffee break
- Afternoon session 2 (17.00 to ≤ 19.00) (stimulated by Didier Picard and Johannes Buchner)
- 17.00 Controversial and open questions - open discussion
- Dinner and party from 19.00