

Congress Program

Sunday, August 29

- 18.00 Town Hall: Registration
19.30 Town Hall: Welcoming Reception

Monday, August 30

- 08.00 Registration
09.00 Welcome and Opening Remarks
Flavins and electrons
Chemistry, physical chemistry, electron transfer, redox reactions
09.15 Flavins: nano-transceivers in biological electron transfer
10.00 Model systems for flavoenzyme activity
10.30 NMR-studies of isoalloxazine interactions in flavoproteins.
11.00 ***Coffee break***
11.30 Flavin-linked redox components required for AhpC reduction in alkyl hydroperoxide reductase systems
12.00 One electron redox cycles in flavin-dependent dehydrations
12.30 Moving through barriers – hydrogen tunneling in flavin and other enzymes
13.15 - ***Lunch***
14.30
15.00 - **Poster session (A01 - H08) & Coffee break**
18.00
18.30 - ***Dinner***
19.30
19.45 - **Evening Lecture:**
20.35 Electron transfer engineering in natural proteins and designed flavoproteins
20.35 - **Poster discussion and short talks on the topics of the day**
22.00
- Chair:** Pilone
Speakers:
Chapman (45 min.)
Rotello (30 min.)
Rüterjans (30 min.)
Poole (30 min.)
Buckel (30 min.)
Klinman (45 min.)
Chair: Mayhew
Speakers: Dutton (50 min.)
Sadeghi (10 min.)
Hooper (10 min.)
Yalloway (10 min.)
Gomes (10 min.)
Graeme (10 min.)

Tuesday, August 31

Flavins and light

Photochemistry, photophysics, lyases, blue light reception, luciferases

Chair: Müller

Speakers:

Briggs (45 min.)

Carell (30 min.)

09.00 Blue light photoreceptors in higher plants

09.45 Light dependent genome repair: investigations with model compounds and DNA photolyases

10.15 DNA photolyase and cryptochrome

Todo (30 min.)

10.45 *Coffee break*

11.15 The cryptochrome family of blue light receptors

Cashmore (45 min.)

12.00 Nuclear localization of the Arabidopsis blue light receptor cryptochrome 2

Batschauer (15 min.)

Luciferases, accessory proteins

12.15 - 12.45 NADPH-specific oxidoreductase and mechanism of reduced flavin transfer to luciferase

Tu (30 min.)

13.00 - 14.30 *Lunch*

15.00 - 18.00 **Poster session (I01 - O10) & Coffee break**

18.30 - 19.30 *Dinner*

Evening Lecture:

19.45 - 20.35 Structural flavoenzymology on the brink

Chair: Veeger

Speakers: Karplus (50 min.)

20.35 - 22.00 **Poster discussion and short talks on the topics of the day**

Aubert (10 min.)

Björnberg (10 min.)

Leys (10 min.)

Nivière (10 min.)

Umhau (10 min.)

Wednesday, September 1

Posters open for inspection and discussion

09.00 - 12.00 Discussion of specific topics in small groups, to be organized.

Afternoon Free (social events and excursions)

19.30 *Banquet*

Living through various phases of flavin research

Speaker: Beinert

Thursday, September 2

	<i>Flavins and oxygen Hydroxylases, Monooxygenases</i>	Chair: Ballou
08.45	Coenzyme recognition by flavoprotein aromatic hydroxylases	Speakers: van Berkel (30 min.)
09.15	Wavin' flavins and passwords: dynamics and control in the reactions of p-hydroxybenzoate hydroxylase	Palfey (30 min.)
09.45	Hydroxylation by flavin enzymes: evidence for NIH-shift mechanism	Eisenreich (30 min.)
10.15	<i>Coffee break</i>	
	<i>Flavoproteins and "C-H-substrates", mechanisms</i>	Chair: Lederer
10.45	Structural biology of oxidases: L-aspartate oxidase, vanillyl-alcohol oxidase and polyamine oxidase	Speakers: Fraaije (30 min.)
11.15	DAAO structure and mechanisms	Miura (30 min.)
11.45	DAAO mechanisms	Pollegioni (30 min.)
12.15	Biochemical and structural characterization of monomeric sarcosine oxidase – a D-amino acid oxidase/monoamine oxidase hybrid	Jorns (30 min.)
12.45	Acyl-CoA dehydrogenases, evolution of an active site	Kim (30 min.)
13.15 - 14.30	<i>Lunch</i>	
15.00 - 18.00	Poster session (P01 - X05) & Coffee break	
18.30 - 19.30	<i>Dinner</i>	
19.45 - 20.35	Evening Lecture: Dihydrolipoyl dehydrogenase, the complex flavoprotein	Chair: Scrutton Speaker: Perham (50 min.)
20.35 - 20.55	Structure and function of the flavin reductase FRase I from the bioluminescent bacterium <i>Vibrio fischeri</i> : X-ray crystallography of FRase I mutants and complexes with inhibitors	Tanokura (20 min.)
20.55 - 21.45	Poster discussion and short talks on the topics of the day	Barna (10 min.) Mewies (10 min.) Schaller (10 min.) Strassner (10 min.)
21.45 - 22.05	Computer visualisation of flavin-dependent aromatic hydroxylation	Ridder (20 min.)

Friday, September 3

Protein-protein interactions

- 09.00 Structure and function of adrenodoxin reductase
09.30 Properties of NifL, a regulatory flavoprotein containing a PAS-domain
10.00 Molecular recognition between ferredoxin-NADP⁺ reductase and its protein partners
10.30 Crystallographic studies of a complex between the ferredoxin-NADP⁺-reductase from the cyanobacterium *Anabaena* PCC7119 and its functional partner

Chair: Edmondson

Speakers:

Schulz (30 min.)

Dixon (30 min.)

Gomez-Moreno (30 min.)

Frey (20 min.)

10.50 *Coffee break*

Multidomain flavoproteins

- 11.20 A new type of FAD-binding resolved in the molybdo iron-sulfur-flavoprotein CO dehydrogenase
12.00 Structure and function of adenosine 5'-phosphosulfate (APS) reductase
12.20 Kinetics, mechanism and regulation of elementary steps of catalysis of pyruvate oxidase from *Lactobacillus plantarum*

Meyer (40 min.)

Fritz (20 min.)

Tittmann (10 min.)

12.40 - 14.00 *Lunch*

Flavoproteins, medical aspects

- 14.45 Flavoproteins, medical aspects: an outlook
15.00 Mimicking human disease in *E. coli*: the role of methylenetetrahydrofolate reductase in hyperhomocysteinemia, cardiovascular disease and neural tube defects
15.40 Structural aspects of the flavoprotein domains of isoforms of nitric oxide synthase
16.10 Disulfide reductases as drug targets in infectious and autoimmune diseases
16.40 Cell transformation by the superoxide-generating oxidase Mox1

Chair: Yagi

Speakers:

Yagi (15 min.)

Matthews (40 min.)

Masters (30 min.)

Schirmer (30 min.)

Lambeth (20 min)

17.00 *Coffee break*

- 17.30 Metal ion binding pathways in mercuric ion reductase
17.50 - 18.30 **Short talks**

Miller (20 min)

Löffler (10 min.)

Becker (10 min.)

Matsuda (10 min.)

18.30 - 19.30 *Dinner*

20.00 - **Evening Lecture:**

20.45 New things about old yellow enzymes

Chair: Ghisla

Speaker: Massey (45 min.)

20.45 Closing remarks