

# *ISE-XI*

## *11th International Colloquium on Endocytobiology and Symbiosis*



*August 29th - September 2nd, 2010  
Tromsø, Norway*



## Sunday, 29.08.2010

**18:30 – 22:00**     **Welcome Reception and Registration at the Museum "Polaria"**

## Monday, 30.08.2010

8:00                    *Departure to Campus (Bus 1)*

8:15                    *Departure to Campus (Bus 2)*

8:45 – 9:00            Opening Remarks

9:00 – 9:50            **The EMBO Lecture**

Membrane Protein Biogenesis in Prokaryotic and Eukaryotic Organisms

**Gunnar von Heijne (Stockholm)**

**9:50 – 12:40**            **Session 1: Protein Transport and Assembly** (Chair: Danja Schünemann)

9:50 – 10:30            Outer Membrane Biogenesis – an Evolutionary Approach

**Enrico Schleiff (Frankfurt)**

10:30 – 11:00           *Coffee Break*

11:00 – 11:20           Preprotein Transport into Complex Plastids of "Chromalveolates"

**Franziska Hempel (Marburg)**

11:20 – 11:40           Specificity and Mechanism of Protein Transport in Plant Cells

**Ralf Bernd Klösgen (Halle)**

11:40 – 12:00           Interplay between the cpSRP Pathway Components, the Substrate LHCP and the Translocase Alb3

**Beatrix Dünschede (Bochum)**

12:00 – 12:20           Light Stress Proteins essential for Photoprotection of Photosystem I in Higher Plants

**Iwona Adamska (Konstanz)**

12:20 – 12:40           Chlorophyll regulates Assembly of Lil3

**Lutz Eichacker (Stavanger)**

12:40 – 14:00           *Lunch Break*

**14:00 – 16:00      Session 2: Genomes and Gene Transfer I (Chair: C. Schmitz-Linneweber)**

- 14:00 – 14:40      Wide and Deep Sequencing of the Atlantic Cod Mitogenome  
**Steinar Johansen (Tromsø)**
- 14:40 – 15:00      Migration of Ribosomal Protein Genes from the Mitochondrion to the Nucleus during Flowering Plant Evolution  
**Linda Bonen (Ottawa)**
- 15:00 – 15:20      Translation Activity of *rps16* mRNA in Tobacco Chloroplasts  
**Masayuki Nakamura (Nagoya)**
- 15:20 – 15:40      How Organelle-derived Coding Region Sequences obtained Functional Promoters in the Nucleus: Possible Roles and Activation Mechanism of Cryptic Promoters in Plants  
**Junichi Obokata (Kyoto)**
- 15:40 – 16:00      The Ups and Downs of Organellar Genes & Genomes  
**Karsten Liere (Berlin)**
- 16:00 – 16:30      *Coffee Break*

**16:30 – 18:20      Session 3: Genomes and Gene Transfer II (Chair: Wolfgang Löffelhardt)**

- 16:30 – 17:10      Endosymbiosis in Dinoflagellates – A Key to their Evolutionary Success?  
**Kjetill Jakobsen (Oslo)**
- 17:10 – 17:40      Endosymbiosis and Genome Mosaicism in Cryptophyte and Chlorarachniophyte Algae  
**John M. Archibald (Halifax)**
- 17:40 – 18:00      Molecular Evidence for the Residual Nuclear Genome of the Green Algal Endosymbiont in the Dinoflagellate *Lepidodinium chlorophorum*  
**Takuya Matsumoto (Tsukuba)**
- 18:00 – 18:20      Biogenetic Aspect of DNA-lacking Plastid of the Oyster Pathogen *Perkinsus marinus*  
**Motomichi Matsuzaki (Tokyo)**
- 18:45                      *Departure to Town (Bus 1)*
- 18:50                      *Departure to Town (Bus 2)*

## Tuesday, 31.8.2010

8:10 *Departure to Campus (Bus 1)*

8:20 *Departure to Campus (Bus 2)*

8:45 – 9:30 **Keynote Lecture**  
The Symbiotic Making of a Photosynthetic Animal  
**Mary Rumpho (Orono)**

9:30 – 11:40 **Session 4: Symbiosis and Parasitism I** (Chair: Anton Liaimer)

9:30 – 10:10 Genome Analyses of an Endosymbiotic Cyanobacterium: A Mirror-Image of a Significant Evolutionary Step?  
**Birgitta Bergmann (Stockholm)**

10:10 – 10:30 Interactions of Diatoms and Bacteria in Photoautotrophic Biofilms  
**Peter G. Kroth (Konstanz)**

10:30 – 11:00 *Coffee Break*

11:00 – 11:20 The Early Evolution of Mutualistic Plant-Fungus Interactions  
**Stefan Rensing (Freiburg)**

11:20 – 11:40 The Glaucocystophyte Alga *Cyanophora paradoxa*: A Living Fossil Mimicking Early Steps of the Endosymbiotic Evolution of the Archaeplastida  
**Wolfgang Löffelhardt (Vienna)**

11:40 – 12:00 Molecular Characterization of Kleptoplastidy in Foraminifera  
**Loic Pillot (Geneva)**

12:00 – 13:30 *Lunch Break*

13:30 – 15:00 **Poster Session I** (with coffee and bisquits)

15:00 *Excursion with Hurtigruta*

*No Busses!*

## Wednesday, 1.9.2010

8:30 *Departure to Campus (Bus 1)*

8:40 *Departure to Campus (Bus 2)*

### 9:00 – 11:50 **Session 5: Symbiosis and Parasitism II** (Chair: John Beck Jensen)

9:00 – 9:40 The Evolutionary Striptease of the Plastid Genome in the Underground Orchid, *Rhizanthella gardneri*

**Ian Small (Perth)**

9:40 – 10:00 Compartmentalization of the Carbohydrate Metabolism in the Protozoan Parasite *Toxoplasma gondii*

**Tobias Fleige (Tromsø)**

10:00 – 10:20 Host Cell Exploitation by Microsporidia

**Eva Heinz (Newcastle)**

10:20 – 10:50 *Coffee Break*

10:50 – 11:10 Tundra Grasses are Hosts to a Diverse Range of Fungal Endophytes

**Kari Anne Bråthen (Tromsø)**

11:10 – 11:30 The Beneficial Interaction between the Root-Colonizing Endophyte *Piriformospora indica* and *Arabidopsis*

**Ralph Oelmüller (Jena)**

11:30 – 11:50 *Piriformospora indica*-induced Intracellular Calcium Elevation confers Resistance against Necrotrophic Fungus in *Arabidopsis*

**Joy Michal Johnson (Jena)**

11:50 -13:00 *Lunch Break*

13:00 – 14:30 Poster Session II (with coffee and biscuits)

### 14:30 – 17:40 **Session 6: Biogenesis and Compartmentation** (Chair: Karsten Fischer)

14:30 – 15:10 The Evolution, Regulation and Complexity of Plastid Division

**Simon Møller (Stavanger)**

15:10 – 15:30 Chloroplast Movements in Terrestrial Angiosperms – What is a Target of Light Signal?

**Halina Gabrys (Krakow)**

- 15:30 – 15:50 Dynamics of the Chloroplast Peroxidase System during Green Plant Evolution  
**Margarethe Baier (Berlin)**
- 15:50 – 16:20 *Coffee Break*
- 16:20 – 17:00 The Evolution of Plastid Solute Transporters  
**Andreas Weber (Düsseldorf)**
- 17:00 – 17:20 Mitochondrial Localisation of Glycolysis in Stramenopiles  
**Carolina Rio Bartulos (Konstanz)**
- 17:20 – 17:50 Is the Plastid Pyruvate Dehydrogenase involved in Chloroplast Gene Expression?  
**Alexandra Bohne (Munich)**
- 18:00 *Guided Tour through the Arctic Botanical Garden (Arve Elvebakk)*
- 18:00 *ISE Board Meeting*
- No Busses!*

## Thursday, 2.9.2010

- 8:30 *Departure to Campus (Bus 1)*
- 8:40 *Departure to campus (Bus 2)*

### 9:00 – 11:50 **Session 6: Gene Expression – Chloroplasts I** (Chair: Junichi Obokata)

- 9:00 – 9:40 Post-Transcriptional Regulation of Plastid Gene Expression: *Cis*-acting Elements and *Trans*-acting Factors  
**Ralph Bock (Golm)**
- 9:40 – 10:00 Expression of Affinity-tagged Phage-type RNA Polymerases in *Arabidopsis thaliana* for Co-Immunoprecipitation and more  
**Johanna Sobanski (Berlin)**
- 10:00 -10:20 Influence of Light on the Transcription of Genes for Organellar RNA Polymerases  
**Lilliana Borsellino (Berlin)**

- 10:20 – 10:50 *Coffee Break*
- 10:50 – 11:10 Characterisation of Plastid Gene Expression and Embryonic Photosynthetic Activity in *Arabidopsis thaliana* Seeds during Maturation  
**Florence Courtois (Grenoble)**
- 11:10 – 11:30 The Proteome of the Transcriptionally Active Chromosome from Spinach Chloroplasts contains Members of the Chromatin Remodelling Swi/Snf Family  
**Joanna Melonek (Kiel)**
- 11:30 – 11:50 A comprehensive subunit catalogue of the “plastid-encoded” RNA polymerase of chloroplasts from higher plants  
**Thomas Pfannschmidt (Jena)**
- 11:50 – 13:00 *Lunch Break*

**13:00 – 14:40 Session 7: Gene Expression – Chloroplasts II (Chair: Iwona Adamska)**

- 13:00 – 13:40 Nuclear Control of Chloroplast Gene Expression in *Chlamydomonas*  
**Michel Goldschmidt-Clermont (Geneva)**
- 13:40 – 14:00 Players and Tactics of Chloroplast Gene Expression in *Chlamydomonas reinhardtii*  
**Jörg Nickelsen (Munich)**
- 14:00 – 14:20 Evolution of Translation Initiation Mechanisms in Bacteria, Mitochondria and Plastids  
**Lars Scharff (Golm)**
- 14:20 – 14:40 Emerging Functions of Plant Sigma Factors – Flexible Network for Regulated Plastid Gene Expression  
**Jennifer Schweer (Bochum)**
- 14:40 – 15:00 *Coffee break*

**15:00 – 17:00 Session 8: Gene Expression – Mitochondria (Chair: Ralf Oelmüller)**

- 15:00 – 15:40 Proteomes in Flux: An Evolutionary Perspective on the Proteomes of Mitochondria and Peroxisomes  
**Toni Gabaldón (Barcelona)**
- 15:40 – 16:00 A Pentatricopeptidrepeat Protein from *Arabidopsis thaliana* influences Translation of the Mitochondrial *Cox2* mRNA  
**Anika Bruhs (Kiel)**

- 16:00 – 16:20 Mitochondrial gene expression of a parasitic dinoflagellate *Perkinsus marinus* involves extensive frameshift at all AGG and CCC codons  
**Isao Masuda (Tokyo)**
- 16:20 – 16:40 Nuclear-encoded Maturases in Plant mitochondria group-II intron splicing  
**Oren Biran-Ostersetzer (Bet Dagan)**
- 16:40 – 17:00 *Coffee break*
- 17:00 – 17:30 **Presentation of Prizes**
- A. Poster Prize** (Sponsored by Agrisera)
- B. Eppendorf Postdoc Prize** (Sponsored by Eppendorf Nordic)
- C. Miescher Ishida Prize**
- 17:30 – 18:10 The primary transcriptome of chloroplasts  
**Thomas Börner (Berlin)**
- 18:10 – 18:30 Closing Remarks
- 19:00 – 22:30** *Conference Banquet at "Forskningsparken"*
- 22:30 *Departure to town (2 Busses)*