



3<sup>rd</sup> UV4Plants Network Meeting, 1. - 3. April 2020 in Kiel, Germany

## **Plant responses to UV radiation - Diversity in time and space**

### **Programme**

**Tuesday, 31. March 2020**

**19.00 - 22.00 Get together**

... at the conference venue (Wissenschaftspark, Frauenhoferstrasse 13, 24118 Kiel)

**Wednesday, 1. April 2020**

**8.15 - 9.00 Registration**

**9.00 Welcome address Prof. Karin Schwarz, vice-president of CAU**

**9.15 - 10.20 Session 1: UV radiation in the physical environment**

Chair: Wolfgang Bilger

Invited speaker: Gunther Seckmeyer

- **New techniques to quantify UV radiation for plant research (30 min)**

Daniele Grifoni, Riccardo Mari, Stefano Romanelli and Luca Fibbi

- **April-June UV and Global radiative regimes at different locations in Europe analysed using ten years of satellite data (15 min)**

Pedro J. Aphalo

- **Solar UV-B and UV-A with  $\lambda \leq 350$  nm are perceived through UVR8: What are the implications? (20 min)**

**10.20 - 11.00 Coffee break**

**11.00 - 12.35 Session 2: Sensing of UV radiation**

Chair: Éva Hideg

Invited speaker: Gareth Jenkins

- **Sensing of UV radiation (30 min)**

Nicolas Tissot, Roman Ulm

- **Cross-regulation between UV-B and visible light signalling in *Arabidopsis* (20 min)**



Henrik Johansson , Katharina Bursch

- **Identification of BBX proteins as rate limiting co-factors of HY5 (15 min)**

Justyna Łabuz, Paweł Hermanowicz, Agnieszka Katarzyna Banaś, Olga Sztatelman, Halina Gabryś

- **Phototropins induce chloroplast movements upon UV-B irradiation (15 min)**

Zheng Zhou, Dirk Schenke, Daguang Cai

- **MicroRNAs constitute an additional regulatory layer in the crosstalk between UV-B and flg22 induced signaling cascades in *Arabidopsis thaliana* (15 min)**

### **12.35 - 13.45 Lunch**

### **13.45 - 15.00 Poster session 1**

Posters with odd numbers

### **15.00 - 15.30 Coffee break**

### **15.30 - 16.45 Session 3: Acclimation responses to UV radiation**

Chair: Marcel Jansen

Invited speaker: Paul Barnes

- **Plant acclimation to UV radiation: Implications for biodiversity in a changing world (30 min)**

Éva Hideg, Gyula Czégény, Arnold Rácz, Kristóf Csepregi, Anikó Máтай, Brigitta Szata, Gábor Jakab, Péter Teszlák

- **Quantifying the invisible? – Evaluating acclimative responses of leaf photosynthesis to UV in indoor and outdoor experiments (15 min)**

Karel Klem, Albert Gargallo-Garriga, Michal Oravec, Petr Holub, Barbora Veselá, Jordi Sardans, Josep Peñuelas, Otmar Urban

- **Morphological, physiological, and biochemical responses of barley leaves and roots to light quality (15 min)**

Laura Díaz-Guerra, Dolores Verdaguer, Joan Font, Josep A. González, Laura Llorens

- **Differential growth and physiological responses of deciduous and perennial plant species facing enhanced UV radiation and reduced water supply (15 min)**

### **16.45 - 17.30 Snack break**

### **17.30 - 18.35 Session 3: Acclimation responses to UV radiation (continued)**

Chair: Barbro Winkler

Qing-Wei Wang, T. Matthew Robson, Marta Pieristè, Michio Oguro, Riichi Oguchi, Yoshinori Murai, Hiroko Kurokawa

- **Testing trait plasticity to the spectral composition of sunlight in forest forb species differing in shade tolerance (20 min)**

Dajana Blagojevic, YeonKyeong Lee, Li Xie, Dag A Brede, Line Nybakken, Ole Christian Lind, Knut Erik Tollefsen, Brit Salbu, Knut Asbjørn Solhaug, Jorunn E. Olsen

- **No evidence of UV-B priming of protection towards gamma radiation in Scots pine seedlings (15 min)**

Tadeja Trošt Sedej, Rok Damjanič, Jerneja Rovtar, Tajda Turk

- **Do three alpine plant species respond differently to high UV at the alpine environment? (15 min)**

Rong Hui, Xinrong Li

- **Comparative physiological responses of two key species in biological soil crusts to enhanced UV-B radiation under field conditions (15 min)**

**Thursday, 2. April 2020**

### **8.15 - 9.00 Registration**

### **9.00 - 10.00 Session 4: Functional photoprotection**

Chair: Javier Martinez-Abaigar

Invited speaker: Andreas Blatt, Luca Leon Breiling, Lena Meier, Maren Michels, Martin Lohr

- **Biosynthesis and evolution of UV-absorbing mycosporine-like amino acids in algae (30 min)**

Vladimír Špunda, Adriana Volná, Radomír Pech, Daniel Vrábl, Martin Navrátil, Michal Štroch, Jakub Nezval

- **Is a sufficient pool of non-structural saccharides a prerequisite for accumulation of protective phenolic compounds and resistance of barley leaves to oxidative stress? (15 min)**

Arnold Rácz, Gyula Czégény, Kristóf Csepregi, Éva Hideg

- **New aspects of leaf phenolic responses to UV (15 min)**

### **10.00 - 10.10 Group photo**

**10.10 - 10.50 Coffee break**

**10.50 - 12.30 Discussion rounds**

**12.30 - 13.40 Lunch**

**13.40 - 14.40 Poster session 2**

Posters with even numbers

**14.40 -15.40 General meeting**

**15.40 - 16.20 Coffee break**

**16.20 -17.20 Session 5: Analytical methods**

Chair: Susanne Neugart

Invited speaker: Hans-Peter Mock

- **Elucidating the spatial distribution of plant metabolites using MS-based imaging methods (30 min)**

Adriana Garibay-Hernández, S. Marquardt, A. Jozefowicz, J. J. Szymanski, H.-P. Mock

- **Elucidation of the molecular basis underlying barley phenylpropanoid metabolism (15 min)**

Alistair W. R. Seddon

- **Developing a proxy for UV-B radiation using *Pinus* spp. pollen grains: a proxy-system model approach (15 min)**

**17.30 Departure to social programme**

A shuttle service will be offered

**18.15 - 19.15 Guided tours (Zoological Museum or Art Gallery)**

**19.30 Conference dinner at restaurant "Schöne Aussichten"**

**Friday, 3. April 2020**

**9.00 - 10.15 Session 6: Application of knowledge**

Chair: Åke Strid

Invited speaker: Titta Kotilainen

- **Plant production environments - Expertise in sampling and analysing spectral irradiance needed (30 min)**

Caspar Friedrich Weßler, Martin Weiland, Melanie Wiesner-Reinhold, Monika Schreiner, Sven Einfeldt, Susanne Neugart

- **The influence of UV-B radiation in combination with blue and red light on the biosynthesis of flavonoid glycosides in different plant species (15 min)**

J. Martínez-Abaigar, M.Á. Del-Castillo-Alonso, L. Monforte, R. Tomás-Las-Heras, E. Núñez-Olivera

- **A supplement of ultraviolet-B radiation under field conditions increases phenolic and volatile compounds of Tempranillo grape skins and the resulting wines (15 min)**

Marco Santin, Annamaria Ranieri, Marie-Theres Hauser, Begoña Miras-Moreno, Gabriele Rocchetti, Luigi Lucini, Åke Strid, Lucrezia Pomarè, Antonella Castagna

- **The outer influences the inner: postharvest UV-B radiation modulates peach flesh metabolome although shielded by the skin (15 min)**

**10.15 - 10.55 Coffee break**

**10.55 - 12.00 Summary of discussions**

**12.00 - 12.15 Final words and closing**