International Plant Helper- and Paired NLR Mini Symposium

19.03. – 21.03.2023

Center for Plant Molecular Biology at the Eberhard Karls University of Tübingen – lecture hall N10 Auf der Morgenstelle 3

March 19th Sunday

7:00pm	get together at Hotel Krone (beverages and snacks)

March 20th Monday

8:50 – 9:00am	Welcome note (Farid El Kasmi)
9:00 – 10:30am	**Session I** – (***Co-)evolution of NLRs and effectors***
10:30 – 11:00am	coffee break
11:00 – 1:00pm	**Session II** – ***NLR mediated resistance***
1:00 – 2:30pm	lunch at the University Cafeteria (Mensa)
2:30 – 4:30pm	**Session III** – ***NLR engineering/structure function***
4:30 – 5:00pm	coffee break
5:00 – 6:00pm	**Session IV** – ***NLR genomics***
6:00 – 7:30pm	**Poster session** – (beverages and snacks)

March 21st Tuesday

9:00 – 10:30am	**Session V** – ***NLR networks***
10:30 – 11:00am	coffee break
11:00 – 1:00pm	**Session VI** – ***ETI-PTI interplay, RNLs, autoimmunity***
1:00 – 2:00pm	lunch at the University Cafeteria (Mensa)
2:00 – 4:00pm	**Session VII** – ***NLR cell biology and TIR signaling***
4:00 – 7:00pm	free time
7:00pm	Symposium Dinner at the Restaurant ‘1821’ Tübingen

!!! END OF MEETING !!!

March 22nd Wednesday

Return to home-town / -country or stay for longer

Monday 20th

9:00 – 10:30am Session I – (Co-)evolution of NLRs and effectors (Chair: *Gal Ofir*)

Ryohei Terauchi Coevolution of rice paired NLRs and *Magnaporthe* effectors

Miriam Lucke Coevolution of the multi-allelic immune receptor RPP1 and ATR1 effector variants

Phil Carella NLR functional conservation on a macroevolutionary timescale

11:00 – 1:0pm Session II – NLR-mediated resistance/signaling (Chair: *Jose M. Salguero*)

Daniel Lüdke A root-specific NLR network confers resistance to plant parasitic nematodes

Heloise Demont Unravelling thermotolerant TIR signaling

Soo Hyun Oh Functionally homologous helper-sensor NLR network contribute to nonhost resistance of *Solanaceae* plants

Himanshu Chhillar Death or Resistance: Why Do You Have to Choose?

2:30 – 4:30pm Session III – NLR engineering / structure function (Chair: P*ingtao Ding*)

Eunyoung Chae Molecular mechanisms of DANGEROUS MIX (DM) autoimmunity: Structural determinants of DM3, an alpha/beta hydrolase, for DM2 NLR mediated autoimmunity

Thomas Kroj Engineering and functional study of the CNL pair RGA4/RGA5 from rice

Mauricio Contreras Biochemical basis of activation in the NRC immune receptor network

Adam Bentham Engineering novel effector recognition specificities using the Pik paired NLRs

5:00 – 6:00pm Session IV – NLR genomics (Chair: *Chunpeng An*)

Ksenia Krasileva Genomic features associated with NLRs

Luisa Teasdale Helper NLR diversity in *Arabidopsis thaliana*

Tuesday 21st

9:00 – 10:30am Session V – NLR networks (Chair: *Maud Bernoux*)

Hiroaki Adachi An atypical NLR protein modulates the NRC immune receptor network in *Nicotiana benthamiana*

Chih-Hang Wu Dissecting the molecular mechanisms underlying helper-sensor NLR specificity in the NRC network

Hee-Kyung Ahn Contrasting immune signalling mechanisms initiated by paired-NLRs and sensor/helper NLRs

11:00 – 1:00pm Session VI – ETI-PTI interplay and RNLs (Chair: *Denis Janocha*)

Birgit Kemmerling ETI-PTI synergy downstream of BAK1

Sera Choi Molecular interplay between PRR complexes and NLRs

Tiancong Qi MONAR1 mediates effector-triggered immunity through manipulating the RNL immune receptors NRG1s and ADR1s

Jose Manuel Salguero Harnessing plant autoimmunity to unravel novel immune regulators

2:00 – 4:00pm Session VII – NLR cell biology and TIR signaling (Chair: Sruthi Sunil)

Li Wan RNL PM localisation and resistosome formation

Takaki Maekawa Biological function and subcellular dynamics of plant MLKL proteins conferring TNL-triggered immunity

Paulo Teixeira A pair of TIR-NLR receptors in *Solanaceae* recognize an effector from *Xanthomonas citri subsp. Citri*

Federica Locci Workings of a lineage-specific TIR immune signaling module

Poster Session - Monday 20th at 6:00 – 7:30pm

Hurtado, Fernando Two novel TIR-NLR receptors in *Nicotiana benthamiana* recognize an effector from *Xanthomonas citri subsp. Citri* (01)

Huang, Yu-Seng Allele diversification and gene loss contribute to the evolution of helper-sensor specificity in an NLR network (02)

Odgen, Sam Characterizing a TIR-only/CC-NBS-LRR Dual Receptor System for Plant Pathogen Recognition (03)

Sugihara, Yu Disentangling the complex gene interaction networks between rice and the blast fungus identifies a new pathogen effector (04)

Mukhi, Nitika Gaining insight into the Cell-death independent immunity in plants (05) with Chunpeng An together

Shimizu, Motoki Genomic exploration of host specificity determinants identifies wheat blast effectors that are recognized by rice NLR (06)

Murray, Kevin Patterns of population-scale NLR diversity in Arabidopsis (07)

Beeh, Simon A N-terminally truncated membrane-associated Arabidopsis NLR functions as a canonical CNL (08)

Brunisholz, Francois and **Cadiou, Lila** Elucidation of the structure and dynamics of complexes formed by the NLR pair RGA4/RGA5 from rice (09)

Vogt, Frank Using autoimmunity to identify and characterize regulators of helper NLR mediated immunity (10)

Weber, Hannah HIR2 – a key factor of receptor organization in plasma membranes (11)

Yeh, Pei-Min Cell-autonomous Transcriptional Reprogramming Mediated by Plant NLRs (12)

Wang, Junli Structure-guided analysis of plant helper NLR-NRG1 in TNL cell death (13)

Kim, Nayun The cryo-EM structures of DM3 reveal that the polymorphism causing hybrid necrosis contributes to the stability of its oligomeric form' (14)

Chia, Khong-Sam The N-terminal executioner domains of NLR immune receptors are functionally conserved across major plant lineages (15)

Zuijdgeest, Xander Unilateral regulation of Arabidopsis thaliana ADR1 activity by members from both RNL subclades (16)

Chhillar, Himanshu TIR Apart NLR-mediated Downstream Signalling (17)

Shepherd, Sam Dynamic localisation of NLRs underpins their immune function (18)

Leo Chillard Structure modeling of the rice RGA4/RGA5 NLRs and their complexes and functional testing of hypothesis (19)