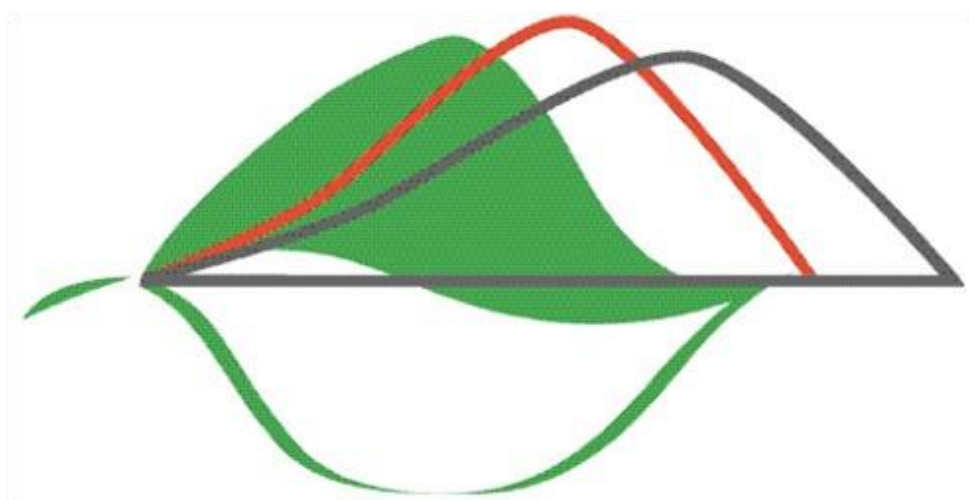


19th International Reinhardtsbrunn Symposium

Modern Fungicides and Antifungal Compounds



Friedrichroda, Germany
07th – 11th April 2019

Program
(as of April 3, 2019)



MARTIN-LUTHER
UNIVERSITÄT
HALLE-WITTENBERG



19th International Reinhardtsbrunn Symposium on Modern Fungicides and Antifungal Compounds

Friedrichroda – Germany, April 07 – 11, 2019

■ Timetable

Sunday, April 07, 2019

| | |
|--------------------|--|
| 17:00-19:00 | Arrival Registration |
| 20:00-22:00 | Welcome Reception with Evening Buffet |

Monday, April 08, 2019 - Morning

| Time | Abstr.ID | Presentation |
|-------|----------|--|
| 08:15 | | Opening: Prof. Dr. Holger B. Deising |
| | | |
| | | Session 1: Fungicide resistance monitoring Chair: Prof. Dr. Holger B. Deising |
| 08:30 | 5 | Keynote 1: Susan Knight: Review of fungicide resistance management in Asia |
| 09:00 | 77 | Bart Fraaije: SDHI sensitivity status of UK <i>Zymoseptoria tritici</i> and <i>Pyrenophora teres</i> field populations |
| 09:20 | 53 | Gilberto Olaya: Fluazinam sensitivity studies on the turf pathogen <i>Clariireedia jacksonii</i> (= <i>Sclerotinia homoeocarpa</i>) in the United States |
| 09:40 | 11 | Alejandra Vielba-Fernández: Monitoring MBC-resistant isolates of the cucurbit powdery mildew, <i>Podosphaera xanthii</i> , using loop-mediated isothermal amplification (LAMP) |
| 10:00 | 67 | Pierre Hellin: Tracking the spread of key mutations in <i>Zymoseptoria tritici</i> conferring resistance to the DMI and SDHI fungicides |
| 10:20 | 106 | Xili Liu: Point mutations in the β -tubulin of <i>Phytophthora sojae</i> confer resistance to ethaboxam |
| 10:40 | | Coffee |
| | | |
| | | Session 2: Fungicide resistance monitoring Chair: Dr. Andreas Mehl |
| 11:00 | 65 | Guilherme Rossato Augusti: Fungicide sensitivity in South American <i>Zymoseptoria tritici</i> field populations |
| 11:20 | 37 | Gerd Stammer: Evolution of SDHI adaptation in cereal pathogens in Europe |
| 11:40 | 92 | Steven Kildea, Joe Mulhare: Control of ramularia leaf spot of barley under Irish growing conditions |
| 12:00 | 78 | Nenad Trkulja: Multi-resistance of <i>Cercospora beticola</i> to MBC, DMI and QoI fungicides |
| 12:20 | 99 | Kevin King: Continued azole sensitivity declines and evolution of PbCYP51 in UK populations of <i>Pyrenopeziza brassicae</i> (light leaf spot of oilseed rape) |
| 12:45 | | Lunch |

Monday, April 08, 2019 - Afternoon

| Time | Abstr.ID | Presentation |
|-------------|----------|---|
| | | Session 3: Resistance management Chair: Dr. Gerd Stammler |
| 14:00 | 4 | Keynote 2: Claudia Godoy : Overcoming the threat of Asian soybean rust in Brazil |
| 14:30 | 13 | Lise Nistrup Jørgensen : Eurowheat: Status for control of <i>Septoria tritici</i> blotch across Europe using azoles |
| 14:50 | 29 | Andreas Mehl : Spectrum and sensitivity impact of CYP51 and SDH target site mutations of <i>Phakopsora pachyrhizi</i> populations from seasons 2018/2019 |
| 15:10 | 14 | Madeline Dowling : Benefits of multi-year resistance monitoring of <i>Botrytis cinerea</i> from strawberry fields in the Eastern United States |
| 15:30 | | Coffee |
| 15:45 | 51 | Mohamed F.R. Khan : Managing <i>Cercospora beticola</i> with resistance to multiple fungicides on sugar beet in the USA |
| 16:05 | 81 | Federico Massi : Temporal analysis of mandipropamid resistance in <i>Plasmopara viticola</i> populations isolated from grapevine fields treated according to anti-resistance strategies |
| 16:25 | 18 | Paulo Lichtemberg : With stable sensitivity and no fitness disadvantage, the management of SDHI resistant mutants of <i>Alternaria alternata</i> will rely on an effective pistachio spray program |
| 16:45 | 47 | Frederike Imbusch : Relation between <i>Cercospora beticola</i> spore flight and leaf spot development after fungicide application according to disease thresholds and/or spore flight |
| | | |
| 17:05-18:30 | | Poster demonstration |
| | | for details see next page |

| Poster No. | Abstr.ID | Presentation |
|------------|----------|--|
| 1 | 15 | Richard Oliver : "Catastrophy theory" – genome-informed classification of filamentous plant pathogens |
| 2 | 60 | David Bohnenkamp : Generation and application of a spectral library for scale and time independent disease detection of foliar diseases of wheat |
| 3 | 42 | Fei Fan : Development and application of loop-mediated isothermal amplification in detection of fungicide resistance in <i>Botrytis cinerea</i> |
| 4 | 9 | Thies Marten Heick : Fungicide resistance in <i>Zymoseptoria tritici</i> and <i>Pyrenophora teres</i> in the NorBaARG region |
| 5 | 10 | Ricardo Feliciano dos Santos : Sensitivity of Asian grapevine leaf rust pathogen (<i>Phakopsora meliosmae-myrianthae</i>) to pyraclostrobin in Brazil |
| 6 | 33 | Pavĺína Jaklová : Testing of sensitivity of <i>Venturia inaequalis</i> population to pyrimethanil from selected orchards in the Czech Republic |
| 7 | 45 | Paulo Lichtemberg : Assessing the sensitivity levels of <i>Colletotrichum</i> spp. to multiple chemical groups with potential use to manage the persimmon anthracnose in Brazil |
| 8 | 61 | Irene Maja Nanni : Dimethomorph activity on different Oomycete species of economic and veterinary interest |
| 9 | 83 | Greta Battistini : Sensitivity of Italian <i>Zymoseptoria tritici</i> isolates to azoxystrobin and pyraclostrobin |
| 10 | 96 | Anja Milosavljevic : Sensitivity Monitoring of <i>Cercospora Beticola</i> to Fungicides in Serbia |
| 11 | 101 | Tatyana Yurina : Application of Benomyl for Control of Phytopathogenic Diseases of Agricultural Plants |
| 12 | 39 | Aurélie Clinckemaillie /Pierre Hellin : Evolution of the sensitivity of Belgian <i>Zymoseptoria tritici</i> populations to DMIs and SDHIs through time or fungicides programs. |
| 13 | 17 | David Young : Characterization of the benzamide binding site on β -tubulin by analysis of resistant mutants in <i>Aspergillus nidulans</i> and protein modeling |
| 14 | 24 | Raffaello Zito : State of knowledge on molecular mechanisms leading to a reduced sensitivity of <i>Plasmopara viticola</i> towards ametoctradin and complex III inhibitors. |
| 15 | 34 | Stefan Jacob : Modulation of a phosphatase-gene as a novel molecular mechanism of fungicide resistance towards fludioxonil |
| 16 | 44 | Mei Luo : Development of an allele-Specific PCR for the detection of benzimidazoles resistance in <i>Monilinia fructicola</i> |
| 17 | 46 | Guillaume Fouché : Contribution of active drug efflux to enhanced tolerance to new fungicides in the wheat pathogen <i>Zymoseptoria tritici</i> |
| 18 | 62 | Irene Maja Nanni : Sensitivity of <i>Plasmopara viticola</i> populations and presence of specific and non-specific resistance mechanisms |
| 19 | 86 | Wesley Mair : Multiple mechanisms account for demethylase inhibitor fungicide control failure in the barley pathogen <i>Pyrenophora teres</i> f. sp. <i>maculata</i> |

| Poster No. | Abstr.ID | Presentation |
|------------|----------|---|
| 20 | 90 | Regula Frey : The evolution of <i>Zymoseptoria tritici</i> sensitivity to triazole fungicides |
| 21 | 48 | Larisa Shcherbakova : In vitro enhancement of the sensitivity to tebuconazole in <i>Bipolaris sorokiniana</i> , a causative agent of cereal root rots, by a microbial metabolite 6-demethylmevinolin |
| 22 | 27 | Annegret Schmitt : Replacement of Contentious Inputs in Organic Farming Systems (RELACS) – a comprehensive Horizon 2020 project |
| 23 | 57 | Resna Nishad : Experimental investigation of chemical defense mechanism in Date palm against common fungal pathogens |
| 24 | 68 | Semcheddine Cherrad : A new biocontrol agent against grape downy mildew |
| 25 | 76 | Tatiana Vlasova : The resistance of <i>Verticillium dahliae</i> to cotton phenolic compounds in the model system |
| 26 | 88 | Bronislava Hortová : Biological control of apple scab (<i>Venturiain aequalis</i>) by biostimulants |
| 27 | 100 | Irina Ageeva : Multifactor Effects of Fullerenes of Shungite on the Morphology and Heterogeneity of <i>Verticillium Dahliae</i> |
| 28 | 19 | Agathe Ballu : Understanding the impact of alternation on resistance evolution by the mean of experimental evolution: the case of <i>Zymoseptoria tritici</i> , the causal agent of <i>Septoria</i> leaf blotch |
| 29 | 28 | Rose Kristoffersen : IPM with cultivar mixtures |
| 30 | 71 | Katia Gazzetti : Sequence and properties of the draft genome of <i>Stemphylium vesicarium</i> |
| 31 | 84 | Steven Kildea : Sensitivity of Irish <i>Blumeria graminis</i> f.sp. <i>avenae</i> populations to the Qol fungicides and implications for the efficacy of the Qols under field conditions |
| 32 | 56 | Yuya Yoshimoto : Discovery of Pavecto® - a new Qol-fungicide |
| 33 | 69 | Ena Šečić : Transcriptional and Post-Transcriptional Gene Silencing in the Defense Against Plant Pathogens |
| 34 | 85 | Nicola Cook : Novel Strategies for Monitoring Fungicide Resistance in Cereal Pathogens |
| 35 | 105 | Fengping Chen : Metalaxyl resistance in <i>Phytophthora infestans</i> |
| 36 | 79 | Anna Brugger : Extension of hyperspectral imaging to the UV-range for sugar beet-pathogen interaction |
| 37 | 94 | Martin Schuster : Life Cell Imaging provides new insides into the mode of action of Azoles |
| 38 | 107 | Elias Alisaac : Identification and discrimination of <i>Fusarium</i> infection at spikelets of wheat: suitability of different sensors |
| 39 | 108 | Elias Alisaac : Effect of fungicide treatment as a control measures to reduce <i>Fusarium</i> mycotoxins contamination in maize and cereal grains |

Tuesday, April 9, 2019, Morning

| Time | Abstr.ID | Presentation |
|-------|----------|--|
| | | Session 4: Molecular mechanisms of fungicide resistance Chair: Dr. Helge Sierotzki |
| 08:00 | 21 | Anne-Sophie Walker: Mechanism of multidrug resistance and risk assessment towards fungicides in <i>Zymoseptoria tritici</i> |
| 08:20 | 38 | Anna Huf: DMI sensitivity of <i>Zymoseptoria tritici</i> and studies on contributing mechanisms in Europe |
| 08:40 | 102 | Iris Eisermann: A single amino acid exchange in the novel transcription factor Azr1 governs azole tolerance of <i>Fusarium graminearum</i> |
| 09:00 | 41 | Chaoxi Luo: Exploring mechanism of resistance to isoprothiolane in <i>Magnaporthe oryzae</i> |
| 09:20 | 43 | Yang Zhou: Development of a loop-mediated isothermal amplification method for the rapid diagnosis of <i>Venturia carpophila</i> on peach |
| 09:40 | | Coffee |
| | | Session 5a: Molecular mechanisms of fungicide resistance Chair: Dr. Bart Fraaije |
| 09:55 | 74 | Geunhwa Jung: SDHI mutations on in vitro sensitivity and field efficacy of SDHI active ingredients in <i>Sclerotinia homoeocarpa</i> , causal agent of dollar spot |
| 10:15 | 103 | Jürgen Derpmann: Characterization of fungicide resistant strains of <i>Sclerotinia sclerotiorum</i> and its' implication on stem rot control in oilseed-rape |
| | | Session 5b: Regulatory aspects Chair: Dr. Bart Fraaije |
| 10:35 | 3 | Keynote 3: Ewa Matyjaszczyk: Registered doses of fungicides: seed dressing versus foliar treatment |
| 11:05 | 35 | Ulrich Gisi: Resistance risk for DMI fungicides in <i>Aspergillus fumigatus</i> : Potential hot spots |
| 11:25 | 72 | Nichola Hawkins: Parallel evolution of fungicide resistance in target and non-target fungi |
| 11:45 | 22 | Anne-Sophie Walker: Proposal for a simple and unified classification of pesticides |
| 12:05 | | Lunch |
| 13:15 | | Bus leaves at hotel for EXCURSION |

Wednesday, April 10, 2019, Morning

| Time | Abstr.ID | Presentation |
|-------|----------|---|
| | | Session 6: Fungicide resistance: mechanisms and diagnosis in Dicot pathogens Chair: Dr. Gerd Stammler |
| 08:00 | 26 | Hideo Ishii : Differential pattern of cross resistance to SDHI fungicides and association with SDH gene mutations in <i>Corynespora cassiicola</i> |
| 08:20 | 7 | Suzanne McKay : Investigating the efficacy of Demethylation Inhibitor fungicides (DMIs) on combinations of <i>E. necator</i> isolates containing low or high ratios of WT and mutant (Y136F) <i>cyp51</i> |
| 08:40 | 95 | Mengjun Hu : A 252-bp deletion in BcOS-1 consistently occurred in offspring mutants of <i>Botrytis</i> group S isolate 5d5, conferring resistance to fludioxonil |
| 09:00 | 52 | Sara Villani : Incorporation of molecular tools to define practical fungicide resistance in the apple scab pathogen, <i>Venturia inaequalis</i> |
| 09:20 | 70 | Katia Gazzetti : Sensitivity of <i>Stemphylium vesicarium</i> of pear to SDHIs |
| 09:50 | 98 | James Adaskaveg : Characterization of resistance to five SDHI sub-groups in <i>Alternaria</i> species causing leaf spot of almond in California |
| 10:10 | | Coffee |
| | | |
| | | Session 7: Resistance modelling Chair: Dr. Helge Sierotzki |
| 10:30 | 20 | Maxime Garnault : Contrasted spatiotemporal dynamics of resistance and its drivers in the pathogenic fungus <i>Zymoseptoria tritici</i> in France revealed by statistical analysis |
| 11:00 | 63 | Martin Urban : The Pathogen-Host Interactions database (PHI-base): Harnessing community expertise to determine anti-infective target sites |
| 11:20 | 66 | Neil Paveley : Managing resistance evolving concurrently against two fungicide modes of action |
| 11:40 | 91 | Alexey Mikaberidze : How can population biological principles inform management of fungicide resistance in crop pathogens? |
| 12:00 | 87 | George Karaoglanidis : Effects of <i>Bacillus subtilis</i> QST 713 on the management of SDHIs resistance in <i>Botrytis cinerea</i> |
| 12:20 | | Lunch |
| | | |

Wednesday, April 10, 2019, Afternoon

| Time | Abstr.ID | Presentation |
|-------|----------|--|
| | | Session 8a: Digital pathogen sensing and resistance risk assessment Chair: Prof. Dr. Holger B. Deising |
| 14:00 | 6 | Keynote 4: Jon West: Smart monitoring of airborne plant pathogens |
| 14:30 | 97 | Anne-Katrin Mahlein: Sensing of wheat diseases in the field – an integrated approach from different scales |
| 14:50 | 32 | Guillaume Fouché: Assessing the risk of resistance selection towards Qil fungicides in <i>Zymoseptoria tritici</i> |
| 15:10 | 49 | Alyssa Koehler: Characterizing <i>Macrophomina phaseolina</i> CYTB gene structure to assess resistance risk and document baseline fungicide sensitives |
| 15:30 | | Coffee |
| | | |
| | | Session 8b: Biorational fungicides / biocontrol Chair: Dr. Andreas Mehl |
| 15:50 | 2 | Keynote 5: Holger B. Deising: Are biologics and biologicals consumers' friends or foes? Plant disease control based on toxic microbial secondary metabolites |
| 16:20 | 40 | Lina Šernaitė: Inhibitory effect of natural products from <i>Anethum graveolens</i> against strawberry grey mold |
| | | |
| | | Session 9: Fungicide resistance and resistance management Chair: Dr. Andreas Mehl |
| 16:40 | 82 | Stefano Torriani: Fungicide resistance evolution in soybean, a threat for disease control |
| 17:00 | 75 | Mônica A Müller: Adaptation of <i>Phakopsora pachyrhizi</i> to DMI, QoI and SDHI fungicide groups |
| 17:20 | 30 | David Young: Fenpicoxamid provides a new target site for control of <i>Septoria</i> leaf blotch in cereals |
| 17:40 | 58 | Semcheddine Cherrad: Resistance of <i>Plasmopara viticola</i> to complex III inhibitors: an overview on phenotypic and genotypic characterization of resistant's strains |

Thursday, April 11, 2019, Morning

| Time | Abstr.ID | Presentation |
|-------|----------|--|
| | | Session 10: New technologies and applications Chair: Dr. Bart Fraaije |
| 08:00 | 1 | Keynote 6: Uwe Conrath : Bifunctional fusion peptides and microgel-based release systems for plant health |
| 08:30 | 25 | Gero Steinberg : Live cell imaging of plant pathogenic fungi to develop new fungicides |
| 08:50 | 36 | Aline Koch : Exosome-like vesicles isolated from transgenic <i>Arabidopsis</i> expressing a long noncoding artificial dsRNA contain dsRNA-derived small RNAs |
| 09:10 | 104 | Jochen Kleemann : A new biochemical approach to study respiration of fungicide-resistant field mutants of phytopathogenic fungi |
| 09:30 | 31 | Melvin Bolton : Use of genome-wide association to identify mutations involved with DMI-resistance in <i>Cercospora beticola</i> |
| 09:50 | 89 | Kejal Dodhia : Faster than a football match: towards in situ disease and fungicide resistance quantification |
| 10:10 | 80 | Fran Lopez : High-throughput genotyping using digital PCR improves detection and quantification of fungicide resistance in <i>Blumeria graminis</i> f. sp. <i>hordei</i> |
| 10:30 | | Coffee |
| | | Session 11: New fungicides Chair: Prof. Dr. Holger B. Deising |
| 10:45 | 16 | Dieter Strobel : Revyso® – the first Isopropanol-Azole |
| 11:05 | 55 | Yuichi Matsuzaki : Biological profile of Pavecto® - a new QoI-fungicide: discovery of tetrazolinone chemical class and in vitro/in vivo analysis of the activity against QoI -resistant fungal strains |
| 11:25 | 50 | Kristin Klappach /Ian Craig : Molecular insight into the binding of Pavecto® - A new QoI-fungicide: Crystallography and molecular modelling provide hypotheses for the activity of tetrazolinone inhibitors against QoI-resistant fungal strains |
| 11:45 | 59 | Daniela Portz : Isotianil - a new tool for the control of wheat blast caused by <i>Magnaporthe oryzae</i> <i>Triticum</i> / <i>Pyricularia graminis-tritici</i> , an emerging global threat |
| 12:05 | 23 | Marcus Fehr : The mitochondrial complex III inhibitor ametocradin has an unusual binding mode |
| 12.25 | | Conference Closing , Prof. Dr. Holger B. Deising |
| 12:45 | | End of Symposium |

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