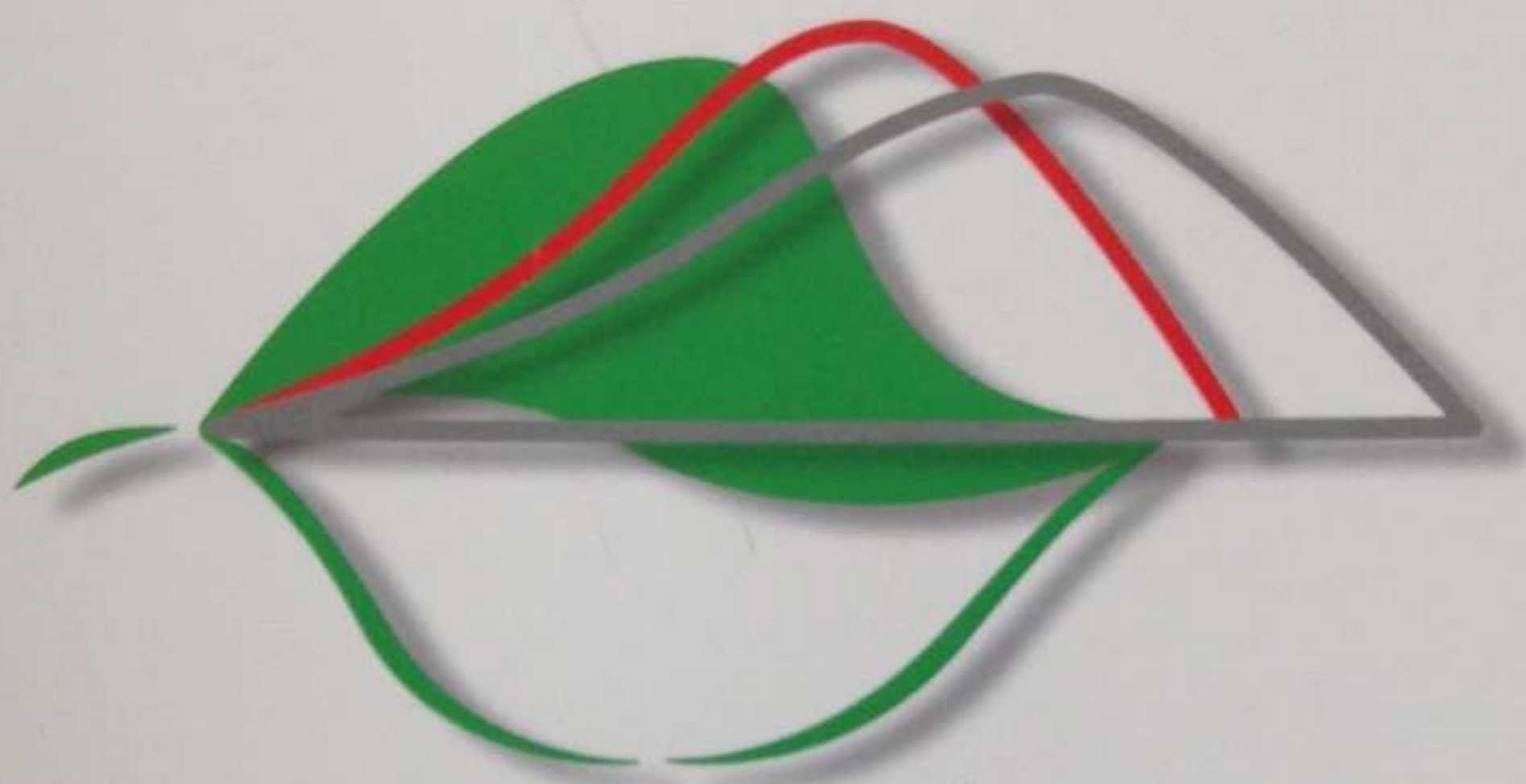


18th International Reinhardtsbrunn Symposium

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Modern Fungicides and Antifungal Compounds

**24th – 28th April 2016
Friedrichroda, Germany**

Program and Abstracts



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MODES OF FUNGICIDE RESISTANCE: DIAGNOSTICS, MOLECULAR, AND GENETIC ASPECTS - Chair: Dr. Gerd Stammeler

08:30	Torriani, S.	CH	Syngenta Crop Protection	Succinate-Dehydrogenase Inhibitor (Sdhi) Resistance Evolution in Plant Pathogens
08:50	Gazzetti, K.	I	University of Bologna	Role of Single Site-Specific Allele Replacement into SvHK1 Locus in the Study of <i>Stemphylium vesicarium</i> Dicarboximide and Phenylpyrrole Fungicides Resistance
09:10	Jung, G.	USA	U of Massachusetts	Mechanisms of fungicide detoxification in <i>Sclerotinia homoeocarpa</i>
09:30	Luo, C.	CN	Huazhong Agricul. University	Function and Detection of the Genetic Element 'Mona' Associated with Fungicide Resistance in <i>Monilinia fructicola</i>
09:50	Tietjen, K.	D	Bayer CropScience	Crystallographic studies of yeast CYP51 with fungicides
10:10	Coffee break			

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FUNGICIDE RESISTANCE MONITORING: REGIONAL AND GLOBAL ASPECTS III - Chair: Dr. Andreas Mehl

10:30	Trkulja, N.	SRB	Inst. for Plant Protection & Environment	Monitoring of <i>Cercospora beticola</i> Resistance to Fungicides in Serbia
10:50	Fernandez-Ortuño, D.	E	IHSM; La Mayora	Resistance to Multiple Fungicides in <i>Botrytis cinerea</i> Isolates from Commercial Strawberry Fields in Spain
11:10	Chong, P.	ECU/ NL	Wageningen University	Genetic Dynamics In Azole Fungicide Resistant In <i>Pseudocercospora fijiensis</i>
11:30	Adaskaveg, J.	USA	University of California	Potassium phosphite resistance and new modes of action for managing Phytophthora diseases of citrus in the United States
11:50	Cherrad, S.	F	CONIDIA	Resistance of <i>Erysiphe necator</i> to SDHI fungicides: first identification in french vineyards, biological and molecular characteristics
12.10	Hawkins, N.	UK	Rothamsted Research	Adaptive landscapes in fungicide resistance: fitness, epistasis, constraints and predictability

Resistance to Multiple Fungicides in *Botrytis cinerea* Isolates from Commercial Strawberry Fields in Spain

Abstract ID 67

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Botrytis cinerea Pers., is one of the most economically important pre- and post-harvest pathogen of strawberry. The main strategy to control the disease involves the application of different classes of fungicides despite that *B. cinerea* is considered a high-risk pathogen for resistance development. We collected a total of 367 *B. cinerea* isolates from 14 strawberry fields in Huelva (Spain) during 2014 and 2015 and determined *in vitro* fungicide sensitivity to all classes of fungicides currently used for gray mold control in Spain. The overall resistance frequencies of 242 isolates collected in 2014 for pyraclostrobin, boscalid, cyprodinil, fenhexamid, iprodione, and fludioxonil were 79, 71, 40, 24, 18, and 0%, respectively. Frequencies of 125 isolates collected in 2015 were 66, 52, 32, 24, 9, and 3%, respectively. Resistant isolates were resistant to either one (9%), two (18%), three (40%), four (13%), five (3%), or six (0%) chemical classes of fungicides in 2014. In 2015, this distribution was 9, 22, 26, 10, 2, and 1%, respectively. Resistance to boscalid, fenhexamid, iprodione, and pyraclostrobin was correlated with point mutations in the corresponding target genes (*sdhB*, *erg27*, *bos1*, and *cytb*). The presence multifungicide resistance phenotypes in *B. cinerea* from strawberry fields in Spain must be considered in future resistance management practices for sustained gray mold control.