

INNOVATIVE CROP PROTECTION

December
13-14,
2016



for 21ST CENTURY FOOD SECURITY

The David Lopatie Conference Centre,
Weizmann Institute of Science,
Rehovot, Israel

The increasing problems of providing stable food security to a growing population under conditions of an unstable, erratically changing climate are being confounded by new problems of protecting crops from weeds, arthropods and pathogens, as well as abiotic stresses including heat, cold, salinity, and pollutants. Novel “out of the box” solutions to these problems, beyond those already being used, are the topics of this workshop.



General

Jonathan Gressel, Weizmann

Problems of crop protection seemingly intractable to conventional solutions

Crop Genetic and Transgenic Approaches

Dudy Bar-Zvi, Ben-Gurion

Modulated protein degradation in plant adaptation to abiotic stress

Ari Sadanandom, Durham University

Exploiting protein modification systems to develop new crop protection strategies

Amit Gal-On, Agricultural Research Organization

CRISPR/Cas9 crop resistance against viruses

Neil Brown, Rothamsted

Innovative approaches to combat mycotoxigenic fungi

Adi Avni, Tel-Aviv University

Inducing plant defense responses mediated by MAMP EIX

Catherine Tetard-Jones, Newcastle

Endophytic engineering of plant defences

Novel Chemical and Physical Approaches

Elena Poverenov, Agricultural Research Organization

Edible nanotechnological coatings protect stored fresh products

Renier van der Hoorn, Oxford

New chemical proteomic approaches to investigate the plant-pathogen interface

Zvi Hayouka, HU Jerusalem

Random peptide mixtures control bacterial pathogens

Oren Ostersetzer, HU Jerusalem

Phenylalanine analogues inhibit plant growth and development

Rob Edwards, Newcastle

The chemical control of chemical control

Emyr Davies, Rothamsted

Pollinators, pests and predators; the pesticide conundrum

Vinnie Altstein, Agricultural Research Organization

Rational design of a family of neuropeptide antagonist insect control agents

Shireen Davies, Glasgow

New neuroendocrinological approaches for insect control

Asaph Aharoni, Weizmann

Betalain against pathogens - more than paint

Anne Osbourn, John Innes

Delivering new plant traits using synthetic biology approaches

Novel Biological Approaches

Jurrian Ton, Sheffield

Exploring and exploiting the plant acquired immune system

Elisa Korenblum, Weizmann

Rhizosphere diversity influences plant metabolome, potentiating stress resistance

Phil Poole, Oxford

Root colonisation and community selection

Amir Sharon, Tel-Aviv University

Isolating endophytes producing biostimulants that reduce need for pesticides

Einat Zchori-Fein, ARO Newe Ya'ar

Insect symbionts as bio-control agents against phloem-restricted pathogens

Robert Jackson, Reading

Novel biological approaches

Raymond St. Leger, Univ. Maryland

Transgenic fungi for arthropod control and growth promotion

“Know thine enemy” to delineate new approaches

Rafi Perl-Treves, Bar-Ilan University

Clustered R genes control disparate pathogens – implications

Eyal Emmanuel, Evogene

Genomics and insect biocontrol

Closing Remarks

Rob Edwards

Conveners

Prof. Robert Edwards, Centre for Synthetic Biology and the Bioeconomy, Head of School – Institute Director, IAFRI, School of Agriculture, Food & Rural Development, Newcastle

Prof. Jonathan Gressel, Plant & Environmental Sciences Weizmann

Registration and abstract
submission for poster session at:
<http://tiny.cc/nchrey>



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Conference Coordinator & Accessibility Issues

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