



ASSOCIATION OF APPLIED BIOLOGISTS

President: Prof. Peter Shewry BA, BSc, PhD, DSc

A one-day conference

at the Linnean Society of London,

Piccadilly, London, UK

on 10 December 2013

PROGRAMME, ABSTRACTS

& DELEGATE LIST

Advances in Nematology

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PROVISIONAL PROGRAMME
(BASIS Points have been applied for)

TUESDAY 10 DECEMBER

09:30 REGISTRATION and COFFEE

Session I

Chair: SUE HOCKLAND (Independent Plant Nematology Consultant, www.plantparasitcnematodes.com)

10:10 *Invited speaker:*

Abandon parochialism in nematology: towards an improved interaction between traditional taxonomy and sequence data to grasp the overwhelming nematode diversity
WIM BERT (Department of Biology, Nematology Unit, Ghent University, Belgium)

10:55 *Invited speaker:*

Molecular markers for nematodes - opportunities and challenges from a Museum's perspective
TIM LITTLEWOOD (Division of Parasites & Vectors, Department of Life Sciences, The Natural History Museum, London, UK)

11:40 **Diagnosis of nematodes of quarantine importance to Brazil**

CLAUDIO MARCELO G OLIVEIRA (Instituto Biológico, PO Box 70, 13001-970 Campinas, SP, Brazil)

12:00 **Plant signals: change nematode behaviour and promote nematode susceptibility**

ROSANE CURTIS (Bionomax UK Ltd, Rothamsted Centre for Research & Enterprise, Harpenden, UK)

12:20 **Histopathological changes caused by *Heterodera sacchari* in NERICA 1 rice roots**

L I AKPHEOKHAI (University of Uyo Nigeria/University of Ibadan, Nigeria), B FAWOLE & A O CLAUDIUS-COLE (University of Ibadan, Nigeria)

12.40 **Developing nematode resistant bananas for Sub-Saharan Africa**

HUGH RODERICK (University of Leeds, UK), C CHANGA (National Agricultural Research Laboratories, Kampala, Uganda), L TRIPATHI (International Institute of Tropic Agriculture (IIPA), Nairobi, Kenya) P E URWIN & H J ATKINSON (University of Leeds, UK)

13:00 **LUNCH**

(This has been arranged at the Goat Tavern (for those who have booked lunch))



14:00 **Posters/Nematology Group AGM/Discussion**

Session II

Chair: JON PICKUP (Science and Advice for Scottish Agriculture (SASA), Edinburgh)

14:30 **Damage and population dynamics of different population densities of the white potato cyst nematode *Globodera pallida* in susceptible and resistant commercial potato crops with and without a nematicide**

D L TRUDGILL and M S PHILLIPS (Scottish Crop Research Institute, Dundee, Scotland)

15:10 **Identification and functional characterisation of *G. pallida* effectors and their host targets**

S MANTELIN (James Hutton Institute, Dundee, Scotland), P THORPE (James Hutton Institute, Dundee, Scotland/University of Leeds, UK), P J COCK (James Hutton Institute, Dundee, Scotland), M COKE (University of Leeds, UK), V C BLOK (James Hutton Institute, Dundee, Scotland), P E URWIN (University of Leeds, UK) & J T JONES (James Hutton Institute, Dundee, Scotland)

15:30 **TEA and MORE POSTER TIME/DISCUSSION**

16:00 **The levamisole-sensitive nicotinic acetylcholine receptor of *Globodera pallida***

JESSICA MARVIN (University of Leeds, UK), ANNA CRISFORD (University of Southampton, UK), LAURA JONES, CATHERINE LILLEY (University of Leeds, UK), VINCENT O'CONNOR, LINDY HOLDEN-DYE (University of Southampton, UK) & PETER J URWIN (University of Leeds, UK)

16:20 **Characterisation of novel secreted proteins and their potential role in cyst nematode parasitism**

SEBASTIAN EVES-VAN DER AKKER (University of Leeds/James Hutton Institute, Dundee, UK), CATHERINE J LILLEY (University of Leeds, UK), JOHN T JONES (James Hutton Institute, Dundee, UK) & PETER E URWIN (University of Leeds, UK)

16:40 **SUMMARY + presentation for best student platform presentation**

17:00 **END OF CONFERENCE**

Posters

Top 10 plant parasitic nematodes in molecular plant pathology

JOHN T JONES (James Hutton Institute, Dundee, Scotland), ANNELIES HAEGMAN (Institute for Agricultural and Fisheries Research (IVLO), Melle, Belgium), ETIENNE G J DANCHIN (INRA, Sophia-Antipolis, France), HARI S GAUR (Sardar Vallabhbhai Patel University of Agriculture & Technology, Meerut, India), JOHANNES HELDER (Wageningen University, the Netherlands), MICHAEL G K JONES (Murdoch University, Perth, Western Australia), TAISEI KIKUCHI (University of Miyazaki, Japan), ROSA MANZANILLA-LÓPEZ (Rothamsted Research, Harpenden, UK), JUAN E PALOMARES-RUIS (University of Miyazaki, Japan), WIM M L WESEMAEL (IVLO, Merelbeke, Belgium/University of Ghent, Belgium) & ROLAND N PERRY (Rothamsted Research, Harpenden, UK/University of Ghent, Belgium)

Modification of giant cell wall molecular architecture by *Meloidogyne incognita*

REFIK BOZBUGA, CATHERINE J LILLEY & PETER E URWIN (University of Leeds, UK)

Revealing the molecular architecture of syncytia induced by cyst nematodes

LI ZHANG, CATHERINE J LILLEY & PETER E URWIN (University of Leeds, UK)

Preliminary study on the HRM real-time PCR-based differentiation of *G. pallida* pathotypes

MARTA BUDZISZEWSKA, PRZEMYSŁAW WIECZOREK, RENATA DOBOSZ & ALEKSANDRA OBREPALSKA-STEPLOWSKA (Institute of Plant Protection - National Research Institute, Poznan, Poland)

Plant-mediated interactions between the peach-potato aphid, *Myzus persicae* and the potato cyst nematode, *Globodera pallida*

GRACE HOYSTED, CATHERINE LILLEY (University of Leeds, UK), SUE HARTLEY (University of York, UK) & PETER URWIN (University of Leeds, UK)

Effects of environmental change: increased nematode pest status on UK crops?

LAURA M JONES, CATHERINE J LILLEY, ANN-KRISTIN KOEHLER, ANDREW J CHALLINOR, HOWARD J ATKINSON & PETER E URWIN (University of Leeds, UK)

Phylogenetic analysis of the *Globodera pallida* nematode found in Poland

ALEKSANDRA OBREPALSKA-STEPLOWSKA, MARTA BUDZISZEWSKA, PRZEMYSŁAW WIECZOREK, BARBARA WRZESINSKA & RENATA DOBOSZ (Institute of Plant Protection - National Research Institute, Poznan, Poland)

Seasonal distribution and abundance of nematode pests of *Musa* spp. in Ilorin, Kwara State, Nigeria

N B IZUOGU (Department of Crop Protection, Faculty of Agriculture University of Ilorin, Nigeria)

Survival of *Cactodera amaranthi* in tropical fields without host plants

RICARDO CUADRA (Instituto de Investigaciones Fundamentales en Agricultura Tropical (Inifat), Santiago de las Vegas, La Habana, Cuba) & RICARDO HOLGADO (Norwegian Institute for Agricultural and Environmental Research, Norway)

The potential of a novel formulation of the fungus *Purpureocillium lilacinum* to regulate sugar beet cyst nematode

NIKOLAOS KOUKIASAS, BARBARA PEMBROKE, SAID EL-HASSAN (University of Reading, UK), IOANNIS VAGELAS (Technological Educational Institute of Thessaly, Greece) & DAVE CRUMP (Nemco, Bedfordshire, UK)