SIP 2015 Vancouver

Meeting at a Glance

*all meetings are in **The Nest***

SATURDAY – August 8

14:00 – 20:00 **Registration** Gage

SUNDAY – August 9

7:30 – 18:00 **Registration** Gage

9:00 – 17:00 **SIP Council meeting** 2504

8:30 – 17:30 **OECD-CRP Symposium** *'Microsporidia in the animal to human food chain: An international symposium to address chronic epizootic disease'* 2301

- Introduction – *G. Stentiford*
- Stressors in the global food chain and the importance of pathogens – *P. Silva*
- Parasites in food chains – *K. Rösel*
- Introduction to *Microsporidia* – *J. Becnel*
- The *Microsporidia*: Where did they come from and where are they going – *P. Keeling*
- Microsporidiosis in humans – an emerging issue? – *L. Weiss*
- Is global immunosuppression linked to rising burdens of microsporidiosis in human and animal populations? - *E. Didier*

10:30 – 11:00 **BREAK**

- How do *Microsporidia* exploit the biochemistry and physiology of the host cell? – *B. Williams*
- Microsporidiosis in farmed animals and terrestrial wildlife – their roles in zoonoses – *L. Weiss*
- Microsporidiosis in companion animals – their role in zoonoses – *K. Snowden*
- *Microsporidia* as regulators of insect populations and disease agents in mass-reared insects – a future threat to edible insect cultivation? – *S. Bjornson*

12:20 – 13:30 **LUNCH**

- Microsporidiosis in wild fish – an emerging issue? – *M. Kent*
- Wild and cultured fish as potential sources of zoonotic infections in humans – *M. Freeman*
- Pathogens of aquatic arthropods – focus on the Enterocytozoonidae – *G. Stentiford*
- Clues for multiple-taxa lifecycles from invertebrate research – *Y. Sokolova*

14:50 – 15:20 **BREAK**

- Is microsporidian infection/disease becoming more common in bumble bees? – *M. Brown*
- Interactions of *Microsporidia* with the global honey bee population – *L. Solter*
- Current and future models for microsporidian research – *E. Troemel*

13:00 – 17:00 **Workshop: Bacteria Division** 2306/9

18:00 – 21:00 **Mixer** Sage Bistro

MONDAY – August 10

7:30 – 18:00 **Registration** Outside Great Hall

8:00 - 10:00 **Opening Ceremony** Great Hall

Todd Kabaluk & Mark Goettel – Organizing Committee

Peter Krell – President, SIP

Welcome Addresses; Award Presentations

Founders' Lecture

James Becnel – Chair of Founders' Lecture Committee

Honoree: Phyllis T. Johnson

Lecturer: G. Stentiford

10:00 – 10:30 **BREAK**

10:30 – 12:30 **Plenary Symposium** Great Hall

' Insect pathogens in nature: ecology and evolution'

- How sea stars get wasted: Evidence of a viral etiology and host response to sea star wasting disease – *C. Burge*
- Symbiont-mediated defense against parasitic nematodes in *Drosophila* – *S. Perlman*
- No nematode is an island: Interactions between entomo-pathogenic nematodes and other organisms – C*. Griffin*
- The ecology of virulence in insect associated bacteria: Field experiments and experimental evolution – *B. Raymond*

12:30 – 14:00 **LUNCH** (on your own)

12:30 – 14:00 **J. Invertebr. Pathol. Board lunch meeting** 2508

14:00 – 16:00 **Symposium-Microsporidia/Diseases of Beneficial Invertebrates** 2301

'*Microsporidia as emerging pathogens'*

- The complex relationship between *Microsporidia* and fungi – *P. Keeling*
- Fish microsporidians: Emerging pathogens or emerging knowledge? – *M. Freeman*
- Understanding phylogenetic relationships among relationships among species in the *Nosema/Vairimorpha* clade: What does genetic similarity say about host switching in the *Microsporidia*? – *W-F. Huang*
- Emergent pathogens of invertebrates: Environmental sampling to identify novel parasite lineages – *B. Williams*
- Investigations into the composition of the microsporidian polar tube – *L. Weiss*

14:00 – 16:00 **Contributed Papers**

Bacteria 1 2306/9

Microbial Control 1 2311

16:00 – 16:30 **BREAK**

16:30 – 18:30 **Symposium-Fungi/Microbial Control** 2301

'*The (underestimated) value of applied research: Moving the theoretical to the practical'*

- Why biopesticides sometimes fail – *R. Gwynn, M. Brownbridge, T. Glare*
- Multiple roles, so what should we measure? An ecological approach to promote the contribution of fungal entomo-pathogens in pest management within the agro-ecosystem – *N. Meyling*
- Research and development of biological crop protection products – *R. Royalty, D. Manker*
- Adapting field trials for microorganisms – in practice – *E. Ladurner*
- How do we improve efficacy monitoring of biopesticides? - *T. Glare, M. Brownbridge, R. Gwynn*

16:30 – 18:30 **Contributed Papers**

Viruses 1 2306/9

Microsporidia 2311

20:00 - **Division meetings** Microbial Control 2301

Diseases of Beneficial Invertebrates 2306/9 (+Workshop)

TUESDAY – August 11

8:00 – 10:00 **Symposium-Bacteria** '*Mechanisms of field resistance to Bt pesticides and Bt-crops'* 2301

- *Bt* resistance in *Plutella* – too many trees? – *N. Crickmore*
- Multiple resistance mechanisms selected in cabbage looper populations resistant to Dipel – *P. Wang*

- Pink bollworm resistance to *Bt* cotton: Similar mechanisms in the lab and the field – *J. Fabrick*
- Mechanism of *Spodoptera frugiperda* resistance to Cry1Fa in *Bt* corn – *J. Jurat-Fuentes*
- Characterization of potential resistance mechanisms to Cry3Bb1 in western corn rootworm (*Diabrotica virgifera virgifera*) – *J. Haas*

8:00- 10:00 **Contributed Papers**
Diseases of Beneficial Invertebrates 1 2311
Viruses 2 2306/9

10:00 – 10:30 **BREAK**

10:30 – 11:30 **Contributed Papers**
Bacteria 2 2301
Diseases of Beneficial Invertebrates 2 2311

11:45 Excursion+BBQ buses leave Gage Residence
15:30 BBQ only buses leave Gage Residence
18:00 5k race Cheakamus Center
18:45 BBQ Cheakamus Center

WEDNESDAY – August 12

8:00 – 10:00 **Symposium-Viruses** '*Advances in host and insect virus genomics*' 2301
- Macro- and Micro-evolutionary trends in baculoviruses – *J. Jehle*
- Alphabaculoviruses: Host transcriptome responses to infection – *G. Blissard*
- Polydnaviruses: From discovery to current insights – *M. Strand*
- Dicistrovirus – hijacking the host translational machinery – *E. Jan*
- Insect metagenomics-based discovery of novel, small RNA viral genomes – *S. Liu*

8:00 – 9:45 **Contributed Papers**
Microbial Control 2 2306/9
Nematode 1 2311

10:00 – 10:30 **BREAK**

10:30 – 12:30 **Symposium-Nematodes/Bacteria** 2306/9
'Intracellular responses to bacteria and bacterial toxins'
- Insecticidal action, cellular interactions and response of combinations of *Photorhabdus*-insect related (Pir) and *Bacillus thuringiensis* Crystal (Cry) toxins – *A. Castagnola*
- Response to Cry1Ac intoxication in midgut cells of *Heliothis* virescens larvae – *C. Oppert*
- Syringe-like infection mechanism of bacterial ABC toxins revealed in molecular detail – *C. Gatsogiannis*
- *Caenorhabditis elegans* nck-1 plays a distinct and specific role in defense against bacterial pore- forming toxins – *A. Sitaram*
- The cell biology of *Wolbachia* - filarial nematode interactions and the dark side of symbiosis – *W. Sullivan*
- *Photorhabdus*: light without heat – *N. Waterfield*

10:30 – 12:30 **Contributed Papers**
Fungi 1 2311
Viruses 3 2301

12:30 - 14:00 **LUNCH** (on your own)

12:30 - 14:00 **Student Workshop w/lunch '***Publishing...'* 2311

14:00 –16:00 **Symposium-Fungi** '*Endophytic fungi: "pro-biotic" microbial associates of plants?*' 2301
- Endophytic entomopathogenic fungi as "plant probiotics": An important tool in protecting and promoting plant health – *C. Keyser*
- Entomopathogenic fungi as endophytes: Interactions with plants and herbivores – *S. Vidal*
- Trading insect nitrogen for photosynthate: Carbon translocation from a plant to an insect pathogenic, endophytic fungus – *M. Bidochka*
- *Metarhizium* as a multifactorial plant growth promoter - *R. St. Leger*

14:00 –15:00 Nematodes Workshop 2311

14:00 –16:00 **Contributed Papers**
Viruses 4 2306/9

16:00 –16:30 **BREAK**

16:30 - 18:30 **POSTER SESSION** Great Hall

20:00 - **Division meetings**: Fungi, Viruses (+Workshop), Microsporidia (+Workshop), Bacteria, Nematodes
See detailed program for division meeting rooms

THURSDAY – August 13

8:00 – 10:00 **Symposium-Nematodes** '*Recent advances in entomopathogenic nematode infection behavior: inside and outside*' 2301
- Advances in entomopathogenic nematode dispersal and host-finding behavior – *D. Shapiro-Ilan*
- Sex, age and following the leader drive infection dynamics of entomopathogenic nematodes – *E. Lewis*
- Impact of infection behavior on lethal male fighting in *Steinernema* – *C. Griffin*
- The stability of virulence in insect parasitic nematodes is determined by social interactions – *B. Raymond*

8:00 – 10:00 **Contributed Papers**
Fungi 2 2306/9
Microbial Control 3 2311

10:00 –10:30 **BREAK**

10:30 –12:30 **SIP Business Meeting** Great Hall

12:30- 14:00 **LUNCH** (on your own)

14:00 –16:00 **Symposium-Microbial Control** 2301
'Synergies enabling the registration & adoption of biological pest controls – the role of governments, academic programmes, and industry'
- Facilitating the registration and adoption of biological pest controls in Canada – *T. Laengle*
- The IR-4 biopesticide and organic support program – *B. Barney*
- How does academia contribute to registration and adoption of biological control agents – a European perspective – *J. Eilenberg*
- Perils and pitfalls of product development and commercialization: An industry perspective - *R. Martin*
- Panel Discussion

14:00 –16:00 **Contributed Papers**
Viruses 5 2306/9
Bacteria 3 2311

16:15- **Student Affairs Business Meeting** 2311

18:00 –24:00 **Banquet** Great Hall