

Insect Biotech Conference – 2015

Conference Schedule

Wednesday Evening – June 3

- 6:00 pm **Registration:** Outside Newman Room
- 7:00 pm **Plenary Talk:** Newman Room
“**JUVENILE HORMONE SYNTHESIS AND REPRODUCTION IN MOSQUITOES**” [Page 1]
Fernando G. Noriega,
Department of Biological Sciences, Florida International University, Miami, FL, USA. <http://biology.fiu.edu/people/faculty/fernando-noriega/>
- 7:45 – 9:00 pm **Reception:** Outside Newman Room (Pizzeria, Beer and Wine)

Thursday, June 4

- 7:45 – 9:00 am **Breakfast:** Topaz Room (The All Canadian)
- 9:00 am **Opening Remarks:** Ian Orchard
- Session Chair:** **Ian Orchard**
- 9:10 am **THE PRESENCE AND FUNCTIONS OF INSULIN-LIKE PEPTIDES IN RHODNIUS PROLIXUS.** [Page 2]
Defferrari, M.S., Orchard, I. and Lange, A.B.
Department of Biology, University of Toronto Mississauga, Mississauga, ON, Canada.
- 9:30 am **ISOLATION AND CHARACTERIZATION OF CORTICOTROPIN RELEASING FACTOR-LIKE DIURETIC HORMONE RECEPTOR IN RHODNIUS PROLIXUS.** [Page 3]
Lee, H.-R., Zandawala, M. and Orchard, I.
Department of Biology, University of Toronto Mississauga, Mississauga, ON
- 9:50 am **CAPA PEPTIDE BIOLOGY IN ADULT MOSQUITOES: AN ANTI-DIURETIC FACTOR IN AEADES AEGYPTI.** [Page 4]
AIDhaheri, A., Uyklu, A. Bhatt, G. and Paluzzi J.P.
Department of Biology, York University, Toronto, ON, Canada.
- 10:10 am **A PROTEIN EXPRESSION ANALYSIS OF THE LEUCINE-RICH REPEATS-CONTAINING GPCR, LGR1, IN THE ADULT YELLOW FEVER MOSQUITO, I.** [Page 5]
Rocco, D.A., Kim, D.H. and Paluzzi J.P.
Department of Biology, York University, Toronto, ON, Canada.
- 10:30 – 10:50 am **Coffee Break:** Outside Newman Room

Session Chair: Angela Lange

- 10:50 am **SECRETION OF Na⁺, K⁺ AND FLUID BY THE MALPIGHIAN TUBULE OF THE LARVAL CABBAGE LOOPER, *TRICHOPLUSIA NI*. [Page 6]**
Ruiz-Sanchez, E.¹, O'Donnell, M.J.¹, and Donini, A.²
¹ Department of Biology, McMaster University. ² Department of Biology, York University.
- 11:10 am **EXPRESSION AND dsRNA KNOCKDOWN OF PUTATIVE AMMONIA TRANSPORTERS IN LARVAL MOSQUITO, *AEDES AEGYPTI*. [Page 7]**
Chasiotis H.¹, Ionescu A.¹, Bui P.¹, Misyura L.¹, Weihrauch D.², and Donini A.¹
¹Department of Biology, York University, Toronto, Canada
²Department of Biological Sciences, University of Manitoba, Winnipeg, Canada
- 11:30am **THE INVOLVEMENT OF SULFAKININS IN THE CONTROL OF FEEDING IN *RHODNIUS PROLIXUS*. [Page 8]**
Al-Alkawi, H., Lange, A. B. and Orchard, I.
Department of Biology, University of Toronto Mississauga, Mississauga, ON, Canada.
- 11:50 am **MECHANISMS OF PROCTOLIN-INDUCED CONTRACTIONS IN *DROSOPHILA*. [Page 9]**
Mercier, A.J., Shahid, M., Jung, J., Brown, C., and Ormerod, K.
Department of Biological Sciences, Brock University, St. Catharines, ON, Canada.
- 12:10 – 1:20 pm **Lunch Break:** Topaz Room (Bagel Bar)

Session Chair: Michael O'Donnell

- 1:20 pm **K⁺ and H⁺ TRANSPORT MECHANISMS OF THE *DROSOPHILA* GUT EPITHELIA. [Page 10]**
D'Silva, N.M. and O'Donnell, M.J.
Department of Biology, McMaster University, Hamilton, ON, Canada
- 1:40 pm **CALCIUM TRANSPORT BY ISOLATED MALPIGHIAN TUBULES OF *DROSOPHILA MELANOGASTER*. [Page 11]**
Browne, A. A. and O'Donnell, M.J.
Department of Biology, McMaster University, Hamilton, ON, Canada.
- 2:00pm **EFFECTS OF ALTERED EXPRESSION OF THE KEAP1/CNCC PATHWAY ON SECRETION OF ORGANIC TOXINS BY MALPIGHIAN TUBULES OF *DROSOPHILA MELANOGASTER*. [Page 12]**
Kaas, M.H.L. and O'Donnell, M.J.
Department of Biology, McMaster University, Hamilton, ON, Canada.
- 2:20 pm **AN EXTRACELLULARLY RECORDED SYNAPTIC POTENTIAL ASSOCIATED WITH MOTOR NERVES OF VAGINA MUSCLES IN THE INSECT VECTOR OF CHAGAS DISEASE, *RHODNIUS PROLIXUS*. [Page 13]**
Chiang, R.G.
Biology Department, Redeemer University College, Ancaster, ON, Canada.

2:40 – 3:00 pm

Coffee Break

Session Chair:

Joffre Mercier

3:00 pm

CHARACTERIZATION OF LONG NEUROPEPTIDE F (NPF) AND ITS ROLE IN FEMALE REPRODUCTION OF THE CHAGAS DISEASE VECTOR, *RHODNIUS PROLIXUS*. [Page 14]

Sedra, L. and Lange, A.B

Department of Biology, University of Toronto Mississauga, Ontario, Canada

3:20 pm

IDENTIFICATION AND CHARACTERIZATION OF THE ADIPOKINETIC HORMONE/CORAZONIN-RELATED PEPTIDE (ACP) SIGNALING SYSTEM IN *RHODNIUS PROLIXUS*. [Page 15]

Zandawala, M., Haddad, A., Hamoudi, Z. and Orchard, I.

Department of Biology, University of Toronto Mississauga, Mississauga, Canada.

3:40pm

ISOLATION AND CHARACTERIZATION OF THE CORAZONIN RECEPTOR IN THE KISSING BUG, *RHODNIUS PROLIXUS*. [Page16]

Hamoudi, Z., Orchard, I. and Lange, A.B.

Department of Biology, University of Toronto Mississauga, Mississauga, Ontario, Canada.

4:00pm

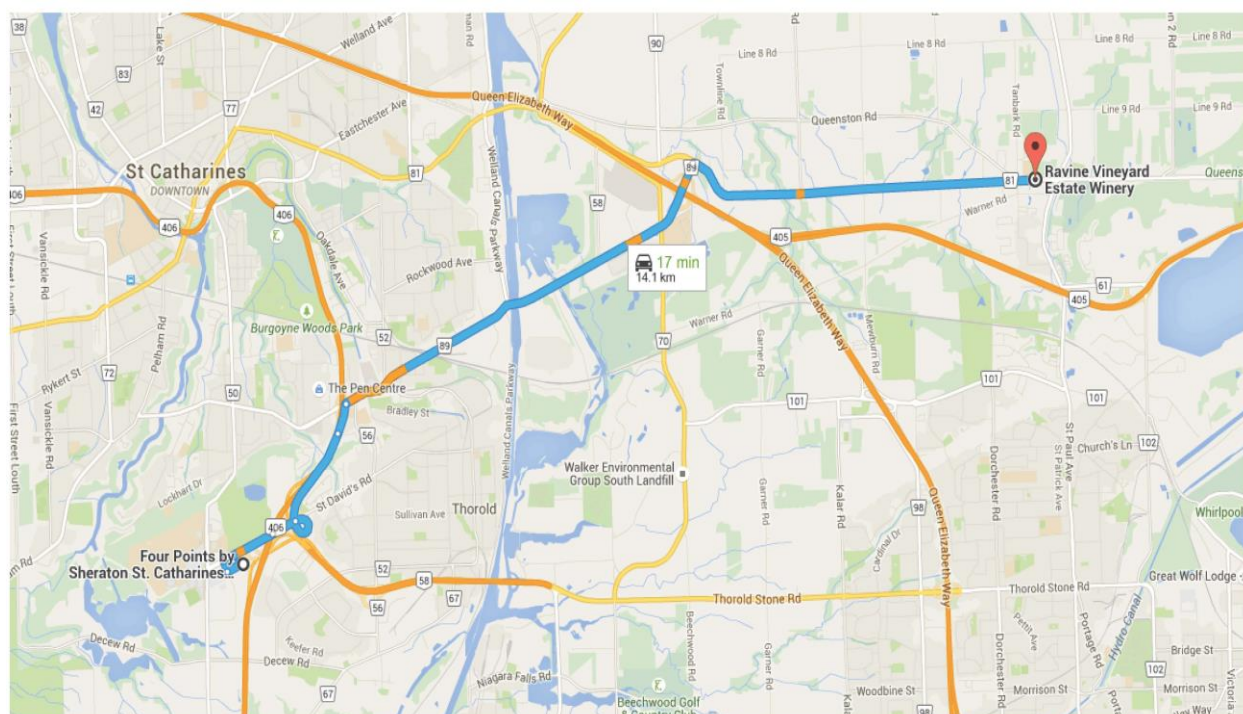
End of Session

6:00 pm

Ravine Vineyard Estate Winery, 1366 York Rd, St. Davids, ON, L0S 1P0, (Historic Wine Tour & Tasting)

7:15 pm

Conference Dinner, Ravine Vineyard Estate Winery, 1366 York Rd, St. Davids, ON, L0S 1P0



○ Four Points by Sheraton St. Catharines Niagara Suites

3530 Schmon Parkway, Thorold, ON L2V 4Y6

Continue to St David's Rd/Regional Rd 71

400 m / 1 min

- ↑ 1. Head northwest toward Schmon Pkwy
260 m
- ↗ 2. Turn right onto Schmon Pkwy
130 m

Take Glendale Ave/Regional Rd 89 to York Rd/Niagara Regional Rd 81 in Niagara-on-the-Lake

13.7 km / 16 min

- ↗ 3. Turn right onto St David's Rd/Regional Rd 71
Continue to follow St David's Rd
750 m
- ↑ 4. Continue straight to stay on St David's Rd (signs for ON-406 N)
350 m
- ⤴ 5. Take the ramp onto ON-406 N
1.8 km
- ↗ 6. Take the Regional Road 89/Glendale Avenue exit
350 m
- ↗ 7. Turn right onto Glendale Ave/Regional Rd 89
5.7 km
- ↗ 8. Turn right onto York Rd/Niagara Regional Rd 81
Destination will be on the left
4.8 km

○ Ravine Vineyard Estate Winery

1366 York Road, St. Davids, ON L0S 1P0

Friday, June 5

7:45 – 9:10 am **Breakfast:** Topaz Room (The All Canadian)

Session Chair: **Daniel Doucet**

9:10 am **ORAL ADMINISTRATION OF TAT-PTD–DIAPAUSE HORMONE FUSION PROTEIN INTERFERES WITH *HELICOVERPA ARMIGERA* DEVELOPMENT.** [Page 17]

Zhou, Z.¹, Li, Y.¹, Yuan, C.¹, Zhang, Y.² and Qu, L.²

¹ College of Forestry, Henan University of Science and Technology, China

² Key Laboratory of Forest Protection, State Forestry Administration, Research Institute of Forest Ecology, Environment and Protection, Chinese Academy of Forestry, Beijing, China.

9:30 am **POSSIBLE ROLES OF *ME53* IN BACULOVIRUS TRANSCRIPTIONAL REGULATION.** [PAGE 18]

Liu, Y.¹, Nagy, E.² and Krell, P.J.¹

¹Department of Molecular and Cellular Biology

²Department of Pathobiology, University of Guelph, Guelph, ON, Canada.

9:50 am **MEASURING THE *MAMESTRA CONFIGURATA* NUCLEOPOLYHEDROSIS VIRUS TRANSCRIPTOME: A TALE OF TWO TECHNOLOGIES.** [Page 19]

Only, B.C.¹, Theilmann, D.A.², Hegedus, D.D.³, Baldwin, D.³ and Erlandson, M.A.³

¹ Southern Crop Protection & Food Research Centre, AAFC, London, ON Canada

² Pacific Agri-Food Research Centre, AAFC, Summerland, B.C. Canada

³ Saskatoon Research Centre, AAFC, Saskatoon, SK, Canada

10:10 – 10:30 am **Coffee Break:** Outside Newman Room

Session Chair: **Jean-Paul Paluzzi**

10:30 am **TRANSCRIPTOME ANALYSIS OF THE EMERALD ASH BORER (EAB), *AGRILUS PLANIPENNIS*: *DE NOVO* ASSEMBLY, FUNCTIONAL ANNOTATION AND COMPARATIVE ANALYSIS.** [Page 20]

Duan, J.^{1,4}, Ladd, T.¹, Doucet, D.¹, Cusson, M.², van Frankenhuyzen, K.¹, Mittapalli, O.³, Krell, P.J.⁴ and Quan, G.¹

¹ Great Lakes Forestry Centre, Natural Resources Canada, Sault Ste. Marie, Ontario, Canada; ² Laurentian Forestry Centre, Canadian Forest Service, Natural Resources Canada, Québec City, Québec, Canada; ³ Department of Entomology, Ohio Agricultural and Research Development Center, The Ohio State University, Wooster, Ohio, United States of America; ⁴ Department of Molecular and Cellular Biology, University of Guelph, Guelph, Ontario, Canada.

10:50 am **ADVENTURES IN INSECT CELL LINE DEVELOPMENT: ESTABLISHMENT OF TWO BEETLE CELL LINES AND STUDY OF THEIR RESPONSE TO CHEMICAL INSECTICIDES.** [Page 21]

Wen, F.^{1,2}, Caputo, G.², Hooey, S.², Bowman, S.², Pinkney, K.², Krell, P.J.¹, Arif, B.², Duan, J.^{1,2}, Quan, G.² and Doucet, D.^{2,3}

¹ Department of Molecular & Cellular Biology, University of Guelph, Guelph, Ontario, Canada, N1G 2W1

² Canadian Forest Service, Natural Resources Canada, 1219 Queen St. East, Sault Ste Marie, Ontario, Canada, P6A 2E5

- 11:10 am **ECDYSONE INDUCTION AND CHITIN-BINDING PROPERTIES OF THE CHORISTONEURA FUMIFERANA CHITIN DEACETYLASE 2.** [Page 22]
Quan, G.¹, Duan, J.^{1,2}, Doucet, D.¹, Ladd, T.¹, Cusson, M.^{3,4}, and Krell, P.J.²
¹ Great Lakes Forestry Centre, Natural Resources Canada, Sault Ste. Marie, ON, Canada.
² Department of Molecular and Cellular Biology, University of Guelph, Guelph, ON, Canada.
³ Laurentian Forestry Centre, Natural Resources Canada, Québec City, Québec, Canada.
- 11:30 - 12:00 noon **Check out of hotel rooms**
- 11:45 – 1:00 pm **Lunch Break:** Topaz Room (Pasta Buffet)
- Session Chair:** **Andrew Donini**
- 1:00 pm **THE EFFECTS OF THE ENTOMOTOXIN JACKBEAN UREASE ON INSECT NEUROMUSCULAR SYSTEM.** [Page 23]
Freitas, T.C.^{1,2}, Orchard, I.¹, Lange, A.B.¹, and Carlini, C.R.²
¹Department of Biology, University of Toronto Mississauga, Mississauga, ON, Canada; ² Center of Biotechnology, Universidade Federal do Rio Grande do Sul, and Brain Institute, Pontificia Universidade Catolica do Rio Grande do Sul, Porto Alegre, Brazil.
- 1:20 pm **FLIGHTS OF FANCY: CHEMICAL ECOLOGY OF NEOTROPICAL CYCADS (ZAMIACEAE) AND THEIR LEAF HERBIVORES.** [Page 24]
Prado, A., Chatel-Launay, N., Windsor, D. and Bede, J.C.
Plant Science, McGill University, Montreal, QC, Canada
- 1:40 pm **NEUROPEPTIDERGIC CONTROL OF FEEDING IN STARFISH: CHARACTERIZATION OF THE SALMFAMIDE SIGNALING SYSTEM.**
[Page 25]
Zandawala, M., Egertová, M., Rowe, M. and Elphick, M.
School of Biological & Chemical Sciences, Queen Mary University of London, London, UK
- 2:00 – 2:10pm **Closing Remarks**
- 2:10 pm **End of Conference**