

International Symposium on Functional Genomic Tools in Honey Bees

Saturday, Aug 6, 2011

112 Forest Resources Building, Penn State

8-8:30 - Coffee, breakfast

8:30 Welcome

8:40 am Kate Ihle, Smithsonian Tropical Research Institute, Panama

The use of RNA-interference as a tool in large-scale behavioral studies.

9:00 Gerard Leboule, Free University of Berlin, Germany

The glutamatergic neurotransmission of the honey bee brain and its involvement in behavior

9:20 Ying Wang, Arizona State University, USA

Failures of knockdown by dsRNA

9:40 Presentations from short course students (10 min/talk)

Vanina Vergoz, University of Sydney, Australia

*Biogenic amine receptor gene expression in the ovarian tissue of the honey bee *Apis mellifera**

Etya Ansalem, University of Tel Aviv, Israel

*Juvenile hormone regulation on aggression-linked differences of Vitellogenin expression in *Bombus terrestris* workers*

Thomas Münz, University of Würzburg, Germany

A potential role of synapsin in the synaptic plasticity of the mushroom body calyx

10:10 am Discussion

10:30 Coffee Break

11:00 Gro Amdam, Arizona State University/Norwegian University of Life Sciences, USA/Norway

Lactobacillus kunkeei — a paratransgenic transformation system for honey bees

- 11:20** **Michelle Flenniken (UC San Francisco, USA)**
Double-stranded RNA mediated antiviral responses in honey bees
- 11:40** **Presentations from short course students (10 min/talk)**
- Carolín Ratzka, University of Würzburg, Germany**
*Does the immune system play a role in controlling the endosymbiosis of the ant *Camponotus floridanus*?*
- Amanda van Haga, University of British Columbia, Canada**
*Characterization and validation of host-pathogen interactions between microsporidia (*Nosema spp.*) and honey bees (*Apis mellifera* L.)*
- Arian Avalos, University of Puerto Rico, USA**
*Memory and endonucleases: A look at the role of *fen-1* in long term memory potentiation*
- 12:10** **Discussion**
- 12:30** **Lunch**
- 1:30 pm** **Christina Grozinger, Penn State University, USA**
Behavioral and evolutionary genomics of pheromone communication
- 1:50 pm -** **Ryszard Maleszka, Australian National University, Australia**
Five years of honey bee genomics: what we now know, what we do not know, and what we can do?
- 2:10 am -** **Zilá Simões, University of São Paulo, Brazil**
Using next generation tools for discovery of developmentally regulated genes
- 2:30 am** **Presentations from short course students (10 min/talk)**
- Aline Silva, University of São Paulo, Brazil**
*Molecular determinants in worker *Apis mellifera* development*
- Karl Glastad, Georgia Tech University, USA**
Utilizing RNAi to explore DNA methylation and mRNA splicing
- Kathe Munke, University of Aarhus, Denmark**
RNAi induced alterations of methylation patterns in Honey Bees
- 3:00** **Discussion**

- 3:20** **Coffee Break**
- 3:40** **Yehuda Ben-Shahar, Washington University, USA**
The 'social' fly: using comparative genetics to understand sociality
- 4:00** **Ehab Abouheif, McGill University, Canada**
Ant polyphenisms
- 4:20** **Presentations from short course students (10 min/talk)**
- Rajee Rajakumar, McGill University, Canada**
Using RNAi to understand the potential role of gene network interruption points underlying wing polyphenism in ants.
- Hagai Shpigler, Hebrew University of Jerusalem, Israel**
Using RNAi technology to explore the function of Krüppel-homolog 1 in the social organization of honey bee and bumble bee societies
- Carolina Santos, University of São Paulo, Brazil**
Differentially expressed genes in hind leg development of honey bee larvae
- 4:50** **Discussion**
- 5:20** **Final comments**

Sunday, August 7

112 Forest Resources Building, Penn State

Discussions 9-12 pm (with break at 10:30)

Lunch 12-1

Wrap up session 1-2

Topics for discussion:

1. Status of the RNAi field and where we are in it
2. What are our options and strategies for progress?
3. What critical experiments can and should be done?
4. Who will do these experiments?
5. How can results be communicated effectively (prepublication?)?,