

*PROGRAMME OF THE 11<sup>th</sup> E.S.I.T.O.*  
*September 19-24, 2009 – Villasimius – Cagliari, Sardinia, Italy*

**Saturday, 19 September**

- 18.00 Welcome to participants  
21.0.21.30 Opening Lecture: Bill S. Hansson  
“Twenty Years After: ESITO research 1989 vs. 2009”

**Sunday, 20 September**

Morning – I<sup>o</sup> Theme: *Olfactory Reception and Transduction* – Chair: Bill Hansson

- 08.30-09.00 Leslie Vosshall  
“Structure-Function Analysis of the Insect Odorant Receptors”
- 09.00-09.15 Richard Benton  
“Odour detection by Ionotropic Receptors”
- 09.15-09.30 Tatsuro Nakagawa, Koji Sato, Kazushige Touhara  
“Putative Amino Acids Involved in Ion Channel Activities of Insect Olfactory Receptors”
- 09.30-09.45 Mattias Alenius and Barry Dickson  
“Regulation of odorant receptor choice in *Drosophila Melanogaster*”
- 09.45-10.00 Anja Fiedler, Bill S. Hansson, Silke Sachse  
“Inhibitory odour responses in *Drosophila* ORNs: the transgenic chloride indicator Clomeleon”
- coffee break
- 10.30-10.45 Philippe Lucas, Marta Grauso, Adeline Pézier and Jean-Pierre Rospars  
“Properties of the Ca<sup>2+</sup>-dependent chloride current in olfactory receptor neurons of the moth *Spodoptera littoralis*”
- 10.45-11.00 Matthieu Louis, Julia Riedl, Mariana López-Matas, Vivek Jayaraman  
“Odor coding with single fly odorant receptors”
- 11.00-11.15 Jürgen Krieger, Maïke Forstner, Ewald Grosse-Wilde, Thomas Gohl, Elisabeth Bouché, Inga Gondesén and Heinz Breer  
“The molecular equipment of pheromone-responsive sensilla in moths: Pheromone receptors, Binding proteins, SNMPs”
- 11.15-11.30 Yuqiao Gu, Philippe Lucas and Jean-Pierre Rospars  
“A model of the moth pheromone receptor neuron within its sensillar environment”
- 11.30-11.45 Immacolata Iovinella, Maria Antonietta Calvello, Maria Giovanna Carucci, Huili Qiao, Alberto Niccolini, Antonio Felicioli, Francesca Romana Dani, Stefano Turillazzi, Paolo Pelosi  
“Odorant-binding proteins and Chemosensory proteins of the honeybee: a proteomic approach”
- 11.45-12.00 Kevin Wanner, Andrew Nichols, Jean Allen, Peggy Bunker, Stephen Garczynski, Charles Linn Jr, Hugh Robertson and Charles Luetje  
“Sex pheromone receptor specificity in the Z and E isomer races of the European corn borer”

Afternoon – II<sup>o</sup> Theme: *Taste Reception and Transduction* – Chair: Leslie Vosshall

- 14.30-15.00 Hubert Amrein, Jesse Slone, Tetsuya Miyamoto, Joseph Daniels  
“Sweet Taste and Pheromone Perception in *Drosophila*”
- 15.00-15.15 Richard G Vogt, Jackson Sparks, Richard Fandino, Jon Staples, Joseph C Dickens  
“SNMP Gene Family: Evolution, Expression and Function”
- 15.15-15.30 Cécile Faucher and Sylwester Chyb  
“Functional study of gustatory receptors in *Drosophila*”
- 15.30-15.45 María Gabriela de Brito Sanchez and Esther Lorenzo  
“Can bees detect the bitter with their legs?”
- 15.45-16.00 Thomas C. Baker  
“Focusing of Pheromone Molecules by Trichoid Sensillar Cuticular Lipid Coatings”
- coffee break
- 16.30-18.00 Poster Visit - Abstract numbers: 3, 22, 24, 40, 60, 61, 74, 76, 78, 92

**Monday, 21 September**

Morning – III<sup>o</sup> Theme: *Peripheral and Central Coding* - Chair: Hanna Mustaparta

- 08.30-09.00 Walter Leal, Zainulabeuddin Syed, Julien Pelletier  
“Reception and perception of attractants and repellents by *Culex* mosquitoes”
- 09.00-09.30 Rickard Ignell, Majid Ghaninia, Sharon Hill, Siju K. Purayil, Shahid Majeed, Bill S. Hansson  
“Neural Correlates of Host Choice Behaviour of Mosquitoes”
- 09.30-09.45 Caroline Joris, M. Susantha B. Mohottalage, Raphaël Tabacchi, Patrick Guerin  
“Tsetse fly responses to volatile plant compounds”
- 09.45-10.00 Jonathan D. Bohbot and Joseph C. Dickens  
“Functional Analysis of a Mosquito Odorant Receptor”
- 10.00-10.15 Remco A. Suer, Yu Tong Qiu, Joop J.A. van Loon and W. Takken  
“Olfactory coding in trichoid sensilla of *Anopheles gambiae* s.s.”
- 10.15-10.30 Yu-Tong Qiu  
”Olfactory function of large coeloconic sensilla of the malaria mosquito *Anopheles gambiae*”
- coffee break
- 11.00-11.30 Silke Sachse, Veit Grabe, Marco Schubert, Sonja Bisch-Knaden and Bill S. Hansson  
“Neural Circuits Underlying Olfactory Processing in *Drosophila*”
- 11.30-11.45 Thomas Niewalda, Thomas Völler, Julia Ehmer, André Fiala & Bertram Gerber  
“Odour perception matches physiological activity patterns in *Drosophila* second-order olfactory neurons”
- 11.45-12.00 Andreas Husch, Debora Fusca, Moritz Paehler, and Peter Kloppenburg  
“Distinct Subtypes of Local Interneurons in the olfactory system of *Periplaneta Americana*”
- 12.00-12.15 Martin N. Andersson, Mattias C. Larsson, and Fredrik Schlyter  
“Peripheral coding of ecologically relevant odours by the European spruce bark beetle, *Ips typographus*”
- Afternoon – III<sup>o</sup> Theme: *Peripheral and Central Coding* - Chair: John Hildebrand
- 14.50-15.20 Mark Stopfer  
“Odor Elicited Oscillations in Insects”
- 15.20-15.35 Marco Schubert, Silke Sachse & Bill Hansson  
“Dissecting the Banana: A Dynamic Gas-Chromatography - Optical Imaging Study”
- 15.35-15.50 Geraldine A. Wright  
“Do the perceptual qualities of odours remain invariant?”
- 15.50-16.05 Antoine Chaffiol, Sylvia Anton, Jean-Pierre Rospars and Dominique Martinez  
“Spike timing precision of pheromone sensitive neurons in the antennal lobe of the moth *Agrotis ipsilon*”
- 16.05-16.20 Marit Strandén and Hanna Mustaparta  
“Physiologically and anatomically characterized olfactory antennal lobe neurons of the moth *Heliothis virescens*”
- 16.20-16.35 Jeff Riffell, Hong Lei and John G. Hildebrand  
“The characterization and coding of complex odor mixtures in the moth *Manduca sexta*”
- 16.35-16.50 Yoichi Seki, Jürgen Rybak, Dieter Wicher, Silke Sachse and Bill S. Hansson  
“Electrophysiology and morphometric analysis of local interneurons in the *Drosophila* antennal lobe”
- 16.50-17.05 Bente G. Berg, Xin-Cheng Zhao  
“Modulation via two spiking amplitudes? Physiological properties of the serotonin-immunoreactive antennal-lobe neuron in *Helicoverpa assulta*”
- coffee break
- 17.35-18.45 Poster Visit - Abstract numbers: 11, 16, 21, 23, 26, 34, 62, 68, 86, 88, 89

**Tuesday, 22 September**

Morning – IV° Theme: *Higher Centres* - Chair: Mark Stopfer

- 08.30-09.00 Kei Ito and Takaaki Miyazaki  
“Systematic Mapping of the Primary Gustatory Center of the *Drosophila* Brain”
- 09.00-09.30 Alison Mercer  
"QMP: the Mother of all Pheromones"
- 09.30-09.45 Wolfgang Rössler and Christina Zube  
“Dual olfactory pathway in Hymenoptera: functional indications from species- and sex-specific adaptations”
- 09.45-10.00 M. Herzog , K. Jørgensen, H. Mustaparta  
“The tarsal gustatory system in *Heliothis virescens*: Functional tracing of peripheral pathways”
- 10.00-10.15 Thomas S. Muenz and Wolfgang Rössler  
“Pheromonal regulation of behavioral plasticity in the honeybee”
- 10.15-10.30 Zsolt Kárpáti, Bill S. Hansson, Teun Dekker  
“Pheromone neuroanatomy and physiology in the European corn borer is sex linked”
- 10.30-10.45 Luke Holman, Stephanie Dreier, Charlotte G. Jørgensen, John Nielsen & Patrizia d'Ettorre  
“Ant queen pheromones: chemical control or signal of quality?”
- 10.45-11.00 Masaru K. Hojo, Ayako Wada-Katsumata, Mamiko Ozaki, Toshiharu Akino, Susumu Yamaguchi and Ryohei Yamaoka  
“Taste and olfactory strategies for parasitic butterfly-host ant chemical communication”
- *coffee break*

– V° Theme: *Plasticity* – Chair: Wolfgang Rössler

- 11.15-11.45 Sylvia Anton  
“Experience-Induced Plasticity of the Chemosensory System in Moths”
- 11.45-12.00 David Jarriault, Philippe Lucas, Jean-Pierre Rospars, Christophe Gadenne, Sylvia Anton  
“Sex pheromone coding and its plasticity in the moth *Agrotis ipsilon*”
- 12.00-12.15 Carlos Ribeiro and Barry J. Dickson  
“Sex peptide receptor and neuronal TOR/S6K signaling modulate value-based nutritional decisions in *Drosophila*”
- 12.15-12.30 Marianna I. Zhukovskaya  
“Sexual state affects pheromone and non-pheromone odour responses in the cockroach”
- 12.30-12.45 Sophie Kromann, Jan Bert Gramsbergen, Bill S. Hansson and Rickard Ignell  
“Moths that a garment fret – neuromodulation of olfaction in mated *Spodoptera littoralis*”
- 12.45-13.00 Romina B. Barrozo, Christophe Gadenne & Sylvia Anton  
“Post-mating sexual abstinence in an insect: a new case of olfactory plasticity”
- 13.00-13.15 Elodie Urlacher, Bernard Francés, Martin Giurfa and Jean-Marc Devaud  
“Modulation of learning by a social signal in an insect brain: a new role for allatostatin, acting through an opioid-like pathway?”
- Excursion and lunch

**Wednesday, 23 September**

Morning – VI° Theme: *Learning and Memory* - Chair: Sylvia Anton

- 08.30-09.00 Henricke Scholz  
“Neuronal Bases of Ethanol Preference in *Drosophila melanogaster*”
- 09.00-09.30 Bertram Gerber  
“Olfaction and olfactory learning in *Drosophila*”
- 09.30-09.45 Claudia Groh, Ian A. Meinertzhagen and Wolfgang Rössler  
“Synaptic plasticity in olfactory microglomeruli in the mushroom body calyx of the honeybee and the fruit fly”
- 09.45-10.00 Mattias C. Larsson, Agnieszka Ruebenbauer, Lina Bryngelsson, Alexandra Schmidt, Paul Becher, Fredrik Schlyter, Peter Witzgall, Bill S. Hansson, Christer Löfstedt  
“Genetics and context influence hierarchical use of olfactory information in *Drosophila*”
- 10.00-10.15 Markus Knaden, Silke Sachse, Bill Hansson  
“What makes a good odour, what makes a good blend? Attractiveness and repellence in *Drosophila* olfaction”
- 10.15-10.30 Agnieszka Ruebenbauer  
“Odor Selection Mechanism - The *Drosophila* model”
- coffee break
- 11.10-12.40 Poster Visit - Abstract numbers: 9, 10, 17, 36, 45, 48, 56, 58, 70, 72, 73, 82

Afternoon - VII° Theme: *Ecology and Evolution* - Chair: Peter Witzgall

- 15.00-15.30 Marcus Stensmyr and Bill S. Hansson  
“Specialized Noses for Specialized Lifestyles”
- 15.30-15.45 Teun Dekker, Anna Maria Angioy, Bill S. Hansson, Irene Ibba  
“A macroglomerular complex for fruit odors radically reverses blend interpretation in specialist *Drosophila sechellia*”
- 15.45-16.00 Manuela Reborá, Gianandrea Salerno, Silvana Piersanti, Elda Gaino  
“Olfaction in Paleoptera insects”
- 16.00-16.15 Nick Bos, Annette Bruun Jensen, Thierry Lefèvre, David Hughes, Patrizia d’Ettorre  
“The smell of infection in ant societies”
- 16.15-16.30 Andreas Reinecke, Anna Henning, Subaharan Kesavan, Shannon Olsson, Bill Hansson  
“Oviposition in *Manduca sexta*: An emerging picture of behavioural responses, chemical stimuli, and their sensory perception”
- 16.30-16.45 Antonia Strutz, Johannes Stökl, Bill S. Hansson, Silke Sachse  
“Multiglomerular activation patterns of *Arum palaestinum* odor components in the *Drosophila melanogaster* antennal lobe”
- 16.45-17.00 Mamiko Ozaki  
“Inter-and intraspecific chemical communication in ants: difference between colonialities”
- coffee break

Banquet and Announcement of the next ESITO

**Thursday, 24 September**

Morning - VIII° Theme: *Artificial Systems* – Chair: Bill Hansson

- 09.00-09.30 Krishna Persaud  
“Gas Sensor Arrays - Moving Towards Biomimetic Aspects of Olfaction”
- 09.30-09.45 Berna A.Z. Anderson, A.R. & Trowell, S.C.  
“Characteristics of insect olfactory receptors compared with a set of metal oxide sensors”
- IX° Theme: *Applied Aspects* – Chair: Tom Baker
- 09.45-10.15 Marco Tasin, C. Ioriatti and G. Anfora  
“Volatile semiochemicals for insect control”
- 10.15-10.30 Geir Kjølbjerg Knudsen and Anders Aak  
“Lure development and mass trapping of *Calliphora vicina* (Diptera; Calliphoridae) in Norwegian stockfish production”
- 10.30-10.45 Yufeng Sun, Huili Qiao, Paolo Pelosi, Tieniu Kang, Liang Sun, Yun Ling, Xinling Yang  
“Analogues (E)- $\beta$ -farnesene as novel aphids insecticides. Synthesis, binding to OBPs and biological activity”
- 10.45-11.30 Presentation of the XII ESITO