9th INTERNATIONAL MEETING
STEROIDS AND NERVOUS SYSTEM

The “Medieval Castle” at the Valentino Park – (photo by G.C. Panzica, 2011)

TORINO, ITALY
February 11 - 15, 2017

FINAL PROGRAM
CONFERENCE ORGANIZED WITH THE SUPPORT OF

Università degli Studi di Milano
Università degli Studi di Torino
Scuola di Medicina, Torino
Dipartimento di Neuroscienze, Torino
Neuroscience Institute of Turin (NIT)
Dipartimento di Scienze Farmacologiche e Biomolecolari, Milano
Center of Excellence on Neurodegenerative Diseases, Milano
Istituto Nazionale di Neuroscienze (INN)
Fondazione Cavalieri Ottolenghi, Torino
Gruppo Italiano di Scienze Neuroendocrine (GISNe)

International Brain Research Organization (IBRO)

Journal of Neuroendocrinology (Wiley)
Frontiers in Neuroendocrinology (Elsevier)
**Committees**

**Organizers**

Roberto C. Melcangi  
GianCarlo Panzica  
(Milano, Italy)  
(Torino, Italy)

**International Scientific Committee**

<table>
<thead>
<tr>
<th>Name</th>
<th>Country</th>
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<tr>
<td>Jacques Balthazart</td>
<td>Belgium</td>
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<tr>
<td>Luis M. García-Segura</td>
<td>Spain</td>
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<tr>
<td>Allan E. Herbison</td>
<td>New Zealand</td>
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<tr>
<td>Margaret McCarthy</td>
<td>USA</td>
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<tr>
<td>Roberto C. Melcangi</td>
<td>Italy</td>
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<td>GianCarlo Panzica</td>
<td>Italy</td>
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<tr>
<td>Monique Vallée</td>
<td>France</td>
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**Local Organizing Committee**

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<tr>
<th>Name</th>
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<tr>
<td>Stefano Gotti</td>
<td>(Torino) - coordinator</td>
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<tr>
<td>Silvia Diviccaro</td>
<td>(Milano)</td>
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<tr>
<td>Alice Farinetti</td>
<td>(Torino)</td>
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<tr>
<td>Silvia Giatti</td>
<td>(Milano)</td>
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<tr>
<td>Marilena Marraudino</td>
<td>(Torino)</td>
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<td>Marzia Pesaresi</td>
<td>(Milano)</td>
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<td>Giovanna Ponti</td>
<td>(Torino)</td>
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<td>Simone Romano</td>
<td>(Milano)</td>
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**Educational Committee**

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<tr>
<th>Name</th>
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<tr>
<td>Cheryl Frye</td>
<td>USA</td>
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<tr>
<td>Silvia Giatti</td>
<td>Italy</td>
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<tr>
<td>Guy Mensah-Nyagan</td>
<td>France</td>
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**Honor Committee**

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<tr>
<th>Name</th>
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<tr>
<td>Gian Maria Ajani</td>
<td>Rector of the University of Torino</td>
</tr>
<tr>
<td>Ezio Ghigo</td>
<td>President of the School of Medicine</td>
</tr>
<tr>
<td>Silvano Massaglia</td>
<td>President of the Research Committee, University of Torino</td>
</tr>
<tr>
<td>GianCarlo Panzica</td>
<td>Director of the Neuroscience Department of Torino</td>
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<tr>
<td>Alessandro Vercelli</td>
<td>Scientific Director of the Fondazione Cavalieri Ottolenghi</td>
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**Meeting Secretariat**

Fondazione Cavalieri Ottolenghi – NICO  
A.O. San Luigi di Orbassano, Reg. Gonzole 10 – 10043 Orbassano (TO)  
Tel +39 (0) 11 6705452 – Fax + 39 (0) 11 6705451  
e-mail: neurosteroids@unito.it

**Meeting Website**

https://sites.google.com/site/neurosteroids2017/home

**Meeting Location**

Dipartimento di Neuroscienze, polo Anatomico  
Corso M. D’Azeglio, 52  
10126 TORINO – Italy
The international meeting on *Steroids and Nervous System* is organized to update our knowledge on the relationships among steroid hormones synthesized in different organs (including brain) and central as well as peripheral nervous system. This is a wide research field covering different areas from molecular biology to behavior. This year the conference is focused on the following topics:

- **Neuroactive steroids and metabolic axis**
- **Mood disorders and stress**
- **Signaling pathways**
- **Sex differences**
- **Focus on human brain**
- **Steroids and gut microbiome/brain axis**
- **New technologies to understand the functions of steroids receptor expressing neurons in vivo**
- **Neuroprotection and neuroinflammation**
- **Estrogens across the lifespan: rapid and chronic influences of estrogens on structural plasticity, memory and disease**
- **Young investigators symposium**

To cover these topics the conference will be organized in satellite symposium, symposia, round table and posters' presentation. Each symposium will run for half day and comprise invited lectures with a few additional short communications (selected by the Organizing Committee) to complete the program.

The other contributions will be displayed in poster format.

**CONFERENCE DESK**

A conference desk will be opened within the following timetable:

**Institute of Human Anatomy (Dept. Neuroscience)**

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Activity</th>
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<tr>
<td>Saturday</td>
<td>11</td>
<td>9.00 - 11.00 (for participants at the Satellite Symposium)</td>
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<tr>
<td>Saturday</td>
<td>11</td>
<td>14.00 - 17.00 (for participants at the meeting)</td>
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<tr>
<td>Sunday</td>
<td>12</td>
<td>8.45 - 13.00</td>
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<td>Monday</td>
<td>13</td>
<td>8.30 - 13.00</td>
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<td>Tuesday</td>
<td>14</td>
<td>8.30 - 13.00</td>
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<tr>
<td>Wednesday</td>
<td>15</td>
<td>8.45 - 11.00</td>
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The conference will be held in **Torino (Turin)**, Italy, at the **Department of Neuroscience**. Both the satellite symposium and the main meeting will be held in the historical building of the old Institute of Human Anatomy corso M. D'Azeglio 52, Hall Giuseppe Levi and Hall B.

Several hotels are very close to the conference site (Plaza, Giotto, Du Parc), therefore, no shuttle bus will be provided to reach the Department. The map is showing how to reach the Department from the Hotel Plaza (see also on the web)

The Department is also relatively close to the Torino main train station (Porta Nuova). The Anatomy Building can be reached by foot, by bus or by Metro (see the web for maps: [https://sites.google.com/site/neurosteroids2017/useful-links](https://sites.google.com/site/neurosteroids2017/useful-links)).

Further tourist information are available at the website of the meeting. Additional information concerning Torino and the Region Piedmont can be found on Internet at:

- [http://www.comune.torino.it/](http://www.comune.torino.it/)
- [http://www.cittametropolitana.torino.it](http://www.cittametropolitana.torino.it)
- [http://www.regione.piemonte.it/](http://www.regione.piemonte.it/)
Poster Presentation
Posters will be on display during the entire conference from Sunday to Wednesday at 14.00. Personal discussions can be organized during the lunch time. The posters will be discussed Tuesday 14, the authors will be requested to be present at least one hour at the poster board.

The poster grids have a variable size (100 or 80 cm horizontal by 200 cm vertical, starting from the floor). Therefore, the recommended size of posters is 70 cm horizontal by 150 cm vertical. Posters will have to be mounted with Binder Clips. Material for mounting will be provided by the Congress staff during the set-up of posters.

Young Investigator Symposium
Six oral communications of 12 min (8 min presentation + 4 min discussion) have been selected from students’ applications. The presentation type is computer presentation. A computer with PowerPoint will be available in the conference room. You should prepare your presentation on a USB pen that will be loaded on the computer. A computer to review the slides will be available in a separate place.

Short Oral Communication
A limited number of oral communications of 15 min (10 min presentation + 5 min discussion) concerning the main topics of the conference have been selected. The presentation type is computer presentation. A computer with PowerPoint will be available in the conference room. You should prepare your presentation on a USB pen (or a CD) that will be loaded on the computer. A computer to review the slides will be available in a separate place.

Lectures
The program is also including a list of invited lectures (25 min presentation + 5 min discussion) and 5 plenary lectures (45 min presentation). A computer with PowerPoint will be available in the conference room. You should prepare your presentation on a USB pen that will be loaded on the computer.

Speakers should give their files to the projectionist at least 15 min before the starting time of their symposium. A computer to review the slides will be available in a separate place. For full compatibility, please save in two formats: .ppt and .pptx, in addition provide a high quality .pdf file.

It is also possible to send the presentation in advance via e-mail.
YOUNG INVESTIGATORS PROGRAM

Poster Competition
Posters presented by Young Investigators (those registered as students/trainees at the meeting) have the option of being judged by an ad hoc Committee constituted by the Educational Committee. We encourage all students who are interested in having their posters be evaluated to contact a person on the Education Committee prior to the poster session to make arrangements.

Students’ awards
A number of awards have been distributed to cover student registration fees. These awards are due to the contribution of the Local Organizing Committee, of members of the Scientific and Educational Committees, International Brain Research Organization (IBRO), Frontiers in Neuroendocrinology (Elsevier), and Journal of Neuroendocrinology (Wiley).

Lunch meet Professor
Meeting will be organized during lunch time among invited speakers to the meeting available to these events and young investigators. These events will permit to the young investigators to share scientific knowledge and to obtain academic information from different Universities.
Payment of fees must be made in Euro (only).

Advanced payment by means of:
1. **Bank transfer** to:
   Fondazione Cavalieri Ottolenghi
   UNICREDIT SpA - Filiale Torino Alfieri
   via Alfieri 7, 10121 Torino (Italy)
   IBAN IT 62 X 02008 01140 000060029682 - BIC UNCRITMM

2. **Credit card**:
   Payment will be through PayPal. Registration rates are increased of 15€ for managing expenses.

**On site payment**, at the registration desk, **only by cash** (no credit cards, no checks, with the exception of Italian checks).

The registration fees cover the attendance to the scientific activities (symposia, poster sessions), to the opening ceremony, to the coffee breaks and lunches during the meeting. In the price of registration is also included an USB pen with the abstract book of the conference. A social dinner (including a guided visit to the Egyptian Museum) has been organized, it is optional and its cost will be charged to those who are willing to participate (see the registration forms).

<table>
<thead>
<tr>
<th><strong>REGISTRATION FEES after Jan 9th (prices in Euro)</strong></th>
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<tbody>
<tr>
<td>Full registrant (including Satellite Symposia)</td>
<td>550.00</td>
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<tr>
<td>Registration for the meeting only</td>
<td>450.00</td>
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<tr>
<td>Student, full registrant (including Satellite Symposia)</td>
<td>350.00</td>
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<tr>
<td>Student, registration for the meeting only</td>
<td>300.00</td>
</tr>
<tr>
<td>Registration to Satellite Symposium only</td>
<td>150.00</td>
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<tr>
<td>One-day registration (only on site)</td>
<td>150.00</td>
</tr>
<tr>
<td>Two-day registration (only on site)</td>
<td>250.00</td>
</tr>
<tr>
<td>Conference dinner (only for those that have reserved in advance)</td>
<td>70.00</td>
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Satellite Symposium
(Organizers: Collado P., Melcangi R.C., Panzica G.C.)

Institute of Human Anatomy (Dept. Neuroscience)
corso M. D'Azeglio 52, Hall Giuseppe Levi and Hall B

NEUROACTIVE STEROIDS AND METABOLIC AXIS

Chairs: Collado P. (Spain), Melcangi R.C. (Italy), Panzica G.C. (Italy)

10.00 Horvath T. (USA) Metabolism and mental illness

10.30 Herman J.P. de Kloet A.D. (USA) Glucocorticoid signaling, stress and metabolism mechanisms of glucocorticoid feedback: role of the adipocyte

11.00 Melcangi R.C. (Italy) Neuroactive steroids and diabetic complications in the nervous system

11.30-12.00 – Coffee break

12.00 Argente-Arizón P., Freire-Regatillo A., Diez F., Argente J., Chowen, J.A. (Spain) Sex steroids and glia in the neuroendocrine control of metabolism

12.30 Tena-Sempere M. (Spain) Estrogens and the integral control of energy homeostasis and related body functions: a brain perspective


13.30-15.00 – Lunch

15.00 Collado P., Carrillo B., Diaz F., Chowen J.A., Pinos H. (Spain) Sex differences in the response to malnutrition. Can estradiol modulates malnutrition effects?


16.00 Panzica G.C., Farinetti A., Bo E., Marraudino M., Ponti G., Gotti S. (Italy) Metabolic disrupting chemicals and peptidergic pathways controlling food intake and energy metabolism


16.45 General discussion and Closure of the Satellite Symposium
INTERNATIONAL MEETING
STEROIDS AND NERVOUS SYSTEM

17.30 OPENING CEREMONY
Welcome to Participants

18.00 OPENING LECTURE:
Herbison A.E. (New Zealand)

Estrogen feedback to GnRH neurons

Chair: Tena Sempere M. (Spain)

19.00 Welcome cocktail
MOOD DISORDERS AND STRESS

Chairs: Brunton P.J. (UK), Riva M.A. (Italy)

9.00 Shannon Weickert C., Owens S.J., Purves-Tyson T.D., Webster M.J., Weickert T.W. (Australia) Increased adolescent testosterone sets the stage for schizophrenia


10.00 Holmes M.C., Wyrwoll C.S. (UK) 11β-hydroxysteroid dehydrogenase type 2, glucocorticoids and risk of neuropsychiatric disorders

10.30-11.00 – Coffee break

11.00 Meijer O.C. (The Netherlands) Glucocorticoid receptors in brain stress circuits: downstream signalling and cell specific effects

11.30 Amianto F., Abbate Daga G., Fassino S. (Italy) Gender differences in the personality traits: hormones or attachment?


12.15-13.00 PLENARY LECTURE

Papadopoulos V. (USA)

Translocator protein (18 kDa): an update on its structure and function

Chair: Mensah-Nyagan A.G. (France)

13.00-15.00 Lunch and Poster exhibition
SIGNALING PATHWAYS

Chairs: Arévalo A. (Spain), Vallée M. (France)

15.00 Kelly M.J., Qiu J., Wagner E.J., Rønnekleiv O.K. (USA) Integration of the anorexigenic effects of estradiol and metabolic hormones by hypothalamic arcuate neurons

15.30 Brown A.R., Mitchell S.J., Herd M.B., Belelli D., Lambert J.J. (UK) Developmentally regulated pregnane steroid synthesis enhances GABA-ergic neurotransmission in mouse thalamocortical neurons and cortical pyramidal neurons

16.00 Tasker J.G., Chen C., Jiang Z., Weiss G. (USA) Stress desensitization of hypothalamic adrenoreceptors via a rapid, glucocorticoid receptor-dependent mechanism

16.30 – 17.00 Coffee Break

17.00 Frye C.A., Walf A.A. (USA) Pregnane xenobiotic receptor (PXR) knockout rats respond to allopregnanolone but neither ligands for progestin receptors nor PXR for neurosteroid-mediated motivated behaviors

17.15 Hsu C-Y, Wu T-H, Wu R-Y, Lu K-T, Chung B-c (Taiwan) Neurosteroid pregnenolone stabilizes cytoskeletons to promote brain functions

17.30 de Bournonville C., de Bournonville M.P., van Eeckhaut A., Smolders I., Ball G.F., Balthazart J., Cornil C.A. (Belgium) Changes in preoptic estradiol and glutamate concentration in the preoptic area during male sexual behavior

17.45 Inoue M., Matsuoka H., Harada K. (Japan) Regulation of GABA signaling by adrenal cortical steroids in adrenal medullary cells
SEX DIFFERENCES

Chair: Garcia-Segura L.M. (Spain), Melcangi R.C. (Italy)


9.30 Cambiasso M.J., Cisternas C.D. (Argentina) Sex chromosome effects on aromatase expression and regulation in mouse developing brain


10.30-11.00 – Coffee break

11.00 Monks D.A., Swift-Gallant A. (Canada) Non-neural androgen receptors affect sexual differentiation of brain and behavior

11.30 Van Hemmen J., Bakker J. (Belgium) The sexual differentiation of the human brain is affected by multifactorial mechanisms: evidence from the complete androgen insensitivity syndrome


12.00 Farinetti A., Marraudino M., Ponti G., Gotti S., Panzica G.C. (Italy) Sexually dimorphic effect of chronic treatment with tributyltin on brain circuits involved in the food intake behavior in adult mice

12.15-13.00 PLENARY LECTURE

Forger N.G. (France)

Epigenetic mechanisms in sexual differentiation of the brain and behavior

Chair: Panzica G.C. (Italy)

13.00-15.00 Lunch and Poster Exhibition


FOCUS ON HUMAN BRAIN

Chairs: Balthazart J. (Belgium), Frye C.E. (USA)

15.00  Nguyen T.-V. (Canada) Developmental effects of androgens in the human brain

15.30  Brinton R.D. (USA) Metabolic aging of the female brain: risks and consequences

16.00  Bixo M., Johansson M., Bäckström T. (Sweden) Effects of GABA active steroids in the female brain with focus on the premenstrual dysphoric disorder

16.30-17.00 Coffee break

17.00-18.30

ROUND TABLE
STEROIDS AND GUT MICROBIOME/BRAIN AXIS

Chairs: Melcangi R.C. (Italy), Panzica G.C. (Italy), Tetel M. (USA)

Tetel M.J. (USA) Estradiol and diet alter the gut microbiome in female mice

O’ Mahony S.M. (Ireland) The role of the microbiota in disorders of the gut-brain axis

NEW TECHNOLOGIES TO UNDERSTAND THE FUNCTIONS OF STEROID RECEPTOR EXPRESSING NEURONS IN VIVO

Chairs: Herbison A.E. (New Zealand), Panzica G.C. (Italy)

9.00 Kawata M. (Japan) Behavior is regulated by steroid hormone receptor-associated mechanism: lesson from new animal model


10.00 Maggi A., Rizzi N. and Ciana P., Vegeto E., Villa A. (Italy) Endocrine influence on neuroinflammation: the use of reporter systems

10.30-11.00 Coffee Break

11.15-12.00 SPECIAL LECTURE

Cartier N. (France)

CYP46A1 and modulation of brain cholesterol metabolism as a therapeutic approach for Alzheimer disease

Chair: Mitro N. (Italy)

12.00-15.00 Lunch and Poster discussion
NEUROPROTECTION AND NEUROINFLAMMATION

Chairs: Garcia-Segura L.M. (Spain), Viviani B. (Italy)

15.00 Brann D., Sareddy G., Zhang Q., Wang R., Vadlamudi R. (USA) Role of the ER coregulator, PELPI in mediating the neuroprotective, anti-inflammatory and cognitive-enhancing effects of estrogen in the brain

15.30 Beyer C., Hoffmann S. (Germany) Sex steroids and inflammasomes: a neuroprotective alliance in the brain


16.30-17.00 Coffee break

17.00 De Nicola A.F., Garay L., Meyer M., Sitruk-Ware R., Guennoun R., Schumacher M., Gonzalez Deniselle M.C. (Argentina) Neurosteroidogenesis and progesterone anti-inflammatory/neuroprotective effects

17.30 Schumacher M., Bielecki B., Ghoumari A., Franklin R.J.M., Ghandour M.S., Traiffort E. (France) The unexpected role of testes, testosterone and the androgen receptor in spontaneous myelin regeneration

17.45 Morello M., Millet P., Landel V., Feron F. (Italy) Vitamin D and Alzheimer’s disease: a new perspective
ESTROGENS ACROSS THE LIFESPAN: RAPID AND CHRONIC INFLUENCES OF ESTROGENS ON STRUCTURAL PLASTICITY, MEMORY AND DISEASE

**Chairs: Choleris E. (Canada), Galea L.A.M. (Canada)**

**9.00** Galea L.A.M. (Canada) Good news and bad news: the effects of estrogens on cognition and neuroplasticity during aging

**9.30** Srivastava D.P. (UK) Rapid regulation of dendritic spine plasticity in health and disease

**10.00** Choleris E., Phan A., Lymer J.M., Sheppard P.A.S., Ervin S.J.K. (Canada) Brain regions involved in the rapid action of estrogens and their receptors on learning

**10.30-11.00 Coffee break**

**11.00** Sohrabji F. (USA) Estrogens and neuroprotection after stroke: effects of age

**11.30** Mehta D., Rex-Haffner M., Pinborg A., Binder E.B., Frokjaer V.G. (Denmark) Gene expression profiles within a pharmacologically induced depression model – the role of estrogen in perinatal depression

**11.45** Marraudino M., Ponti G., Farinetti A., Macchi E., Gotti S., Keller M., Collado P., Panzica G.C. (Italy) The sexually dimorphic obesogenic effect of early postnatal genistein administration on CD1 mice

**12.00** Clark S., Rainville J., Vasudevan N. (United Kingdom) Can aggression in male mice be regulated in a non-genomic manner by steroids?

**12.15 – 13.00 - PLENARY LECTURE**

**Micevych P. (USA)**

Membrane-initiated estradiol and progesterone signaling in female reproduction

**Chair: Balthazart J. (Belgium)**

**13.00-14.00 Lunch**
14.15-15.30

YOUNG INVESTIGATOR SYMPOSIUM

Chairs: Frye C.A. (USA), Giatti S. (Italy), Mensah-Nyagan A.G. (France)

BDNF maintains normal estrous cycling – relevance to schizophrenia

Overgaard A., Lieblich S.E., Wong S., Galea L.A.M., Frokjaer V.G. (Denmark)
Behavioural and hippocampal changes across the pre- to postpartum transition in rats

Mitchell S.J., Maguire E.P., Swinny J.D., Seifi M., Belelli D., Lambert J.J. (Scotland)
Neurosteroids: endogenous modulators of the GABA_A receptors of the nucleus accumbens

Nuzzo M.T., Marino M. (Italy) Novel application for estrogen receptor β ligands

Yanguas-Casás N., Crespo-Castrillo A., Arevalo M.A., Garcia-Segovia L.M. (Spain) Sex differences in the phagocytic and migratory capacity of rat microglia

Silva M.S.B., Prescott M., Campbell R.E. (New Zealand) Dissecting the GABA-to-GnRH neuron network in the pathophysiology of polycystic ovary syndrome (PCOS)

16.00 Guided visit to the Egyptian Museum - bus transfer
(included in the social dinner ticket)

21.00 Social Dinner (Ristorante Defilippi, Gassino Torinese)
Mood disorders and stress

1. **Begni V., Pfeiffer N., Gass P., Riva M.A. (Italy)** Long-lasting behavioural and molecular alterations following exposure to stress in adolescence

2. **Berkiks I., El hessni A. (Morocco)** The early life immune stimulation induces a sex differences in long-lasting modifications in cognitive behavior

3. **Boero G., Pisu M.G., Biggio F., Banni S., Serra M. (Italy)** Social isolation induces alterations in glucocorticoid-mediated negative feedback on the HPA axis


5. **Cattaneo A., Luoni A., Cattane N., Pape J., Mariani N., Binder E.B., Riva M.A., Pariante C.M. (Italy)** Long lasting SGK1 modulation in response to early life stress: focus on epigenetic mechanisms

6. **Cavallini C., Costa B., Da Pozzo E., Martini C. (Italy)** Residence time: a new parameter to predict neurosteroidogenic efficacy of TSPO ligands

7. **Lai Y., Brunton P.J. (UK)** A role for hippocampal mineralocorticoid receptors in differentially modulating spatial learning under stressful conditions in prenatally stressed rats

8. **Lucchi C., Meletti S., Monti G., Giovannini G., Bedin R., Trenti T., Rustichelli C., Biagini G. (Italy)** Decreased allopregnanolone levels in cerebrospinal fluid obtained during status epilepticus

9. **Sze Y., Gill A.C., Brunton P.J. (UK)** Comparison of derivatization agents for the quantification of a panel of neurosteroids using liquid chromatography-tandem mass spectrometry (HPLC-MS/MS)


11. **Wu T.-H., Chung B.-c. (Taiwan)** Neurosteroid pregnenolone promotes actin polymerization via CLIP-170 and Dia
Signaling pathways

12. Frye C.A., Walf A.A. (USA) *Pregnane xenobiotic receptor (PXR) knockout rats respond to allopregnanolone but neither ligands for progestin receptors nor PXR for neurosteroid-mediated motivated behaviors*


15. Lyubimov A.V., Lebedev A.A., Morozov V.I., Shabanov P.D. (Russia) *Neurotransmitters and CRF of the extended amygdala system in mechanisms of reinstatement of place preference of amphetamine in rats*

16. Puja G., Balleza D., Sacchi M., Alessandrini A. (Italy) *Effect of neurosteroids on model membranes and on intact cells: lipid bilayer and cytoskeleton interactions are important for their mechanism of action?*

17. Walf A.A., Frye C.A. (USA) *Females with moderate traumatic brain injury perform better in the WADA test when their right hemisphere is available*

Sex differences


21. Grgurevic N., Majdic G. (Slovenia) *Influence of prenatal exposure to testosterone on social behavior in valproate mice model for autism*

23. Mazzeo P., Farinetti A., Marraudino M., Panzica G.C., Gotti S., **Ponti G. (Italy)** Early postnatal genistein administration disrupt sexual dimorphism in a subset of olfactory bulb interneurons

24. **Paterlini S.**, Panelli R., Gioiosa L., Parmigiani S., Oberto A., Eva C., Palanza P. **(Italy)** Sex differences in vulnerability to social and metabolic challenge in conditional NpyIr knockout mice


**Neuroprotection and neuroinflammation**

27. **Arbo B.D.**, Hoppe J.B., Rodrigues K., Garcia-Segura L.M., Salbego C.G., Ribeiro M.F. **(Brazil)** 4’-chlorodiazepam is neuroprotective against amyloid-beta in organotypic hippocampal slices


29. **Da Pozzo E.**, Giacomelli C., Cavallini C., Barresi E., Costa B., Taliani S., Santoro A., Meli R., Da Settimo F., Martini C. **(Italy)** TSPO PIGA ligands promote neurosteroidogenesis and astrocyte well-being

30. **Emanuelsson I.**, Wikvall K., Norlin M. **(Sweden)** Effects of vitamin D analogues calcipotriol and tacalcitol on T98G glioblastoma cells


34. **Lammerding L., Herzog R., Zendedel A., Slowik A., Beyer C. (Germany)** Impact of progesterone on inflammasomes and inflammatory miRNA expression in the peri-infarct area after ischemia in the rat brain


36. **Matta C., Mensah-Nyagan A.G., Taleb O. (France)** Effects of allopregnanolone on behavioral and electrophysiological alterations induced by neo-adjuvant chemotherapy

37. **Mitro N., Cermenati G., Audano M., Giatti S., Pesaresi M., Spezzano R., Melcangi R.C., Caruso D. (Italy)** Beneficial effects of dihydroprogesterone treatment on rat cerebral cortex myelin lipid profile altered by diabetes

38. **Ortiz-Rodriguez A., Acaz-Fonseca E., Garcia-Segura L.M., Arévalo M.A. (Spain)** Sex differences in palmitic acid effects on cultured cortical astrocytes


40. **Spezzano R., Maldini M., Cermenati G., Audano M., Giatti S., Pesaresi M., Melcangi R.C., Mitro N., Caruso D. (Italy)** Neuroactive steroid levels in sciatic nerve: impact of blunted de novo fatty acid synthesis

**Rapid and Chronic effects of estrogens**

41. **Bonnet C., Marighetto A., Marsicano G., Chaoulloff F., Potier M. (France)** Estradiol decreases neuronal excitability at CA3-CA1 synapses through type 1 cannabinoid (CB1) receptor

42. **Charlier T.D., Seredynski A.L., Niessen N.-A., Ball G.F., Chalmel F., Balthazart J. (France)** Sex steroid-dependent gene transcription in japanese quail hypothalamus and the male sexual behavior

43. **Farinetti A., Marasciulo S., Panzica G.C. (Italy)** The brainstem serotonin system and cell proliferation in adult male rat SVZ are regulated by gonadal hormones
44. **Higo S., Iijima N., Ozawa H. (Japan)** Neurochemical characterization of neurons expressing Kiss1r (Gpr54) in the female rat hypothalamus using in situ hybridization and immunofluorescence

45. **Ozaki S., Higo H., Ozawa H. (Japan)** Whole brain mapping of Kiss1r-expression and its region-specific regulation by estradiol in the rat


47. **Villa A., Pepe G., Vegeto E., Maggi A. (Italy)** The influence of sex and sex hormones on microglia phenotype: insights from high throughput RNA sequencing data

### Endocrine disruptors

48. **Nicolau J.C., Vaillant C., Pellegrini E., Charlier T.D., Kah O., Coumailleau P. (France)** Estrogenic effects of several bisphenol A substitutes in the developing zebrafish brain

49. **Pellegrini E., Vaillant-Capitaine C., Gueguen M.M., Feat J., Cano-Nicolau J., Brion F., Kah O. (France)** Effets of progesterone (P4) and norethindrone (NOR) on the neurodevelopment of zebrafish larvae

50. **Wnuk A., Rzemieniec J., Kajta M. (Poland)** Endocrine disrupting capacity and mechanisms of action of a chemical UV filter benzophenone-3 in the mouse neuronal cells

### Other

51. **Almokhtar M., Wikvall K., Ubbayasekera K., Bergquist J., Norlin M. (Sweden)** Motor neuron-like NSC-34 cells as a new model for the study of vitamin D metabolism in the brain

52. **Cosentino L., Vigli D., Laviola G., De Filippis B. (Italy)** Characterization of the estrous cycle in female mice modelling Rett syndrome

53. **Dury A.Y., Gonthier R., Simard J.-N., Ke Y., Labrie F. (Canada)** Requirements for the reliability of a multiplex LC-MS/MS assay for endogenous steroids
54. **Frintrop L., Trinh S., Herpertz-Dahlmann B., Seitz J., Beyer C. (Germany)** *Memory impairments, estrogen loss and reduced astrocyte density in an activity-based anorexia rat model*

55. **Giallongo C., Bramanti V., Grasso S., Camiolo G., Pappa R., Anfuso C.D., Lupo G., Viola M., Avola R., Tibullo D. (Italy)** *Neurosteroid hormones-neurotrophic factors crosstalk regulates glial fibrillary acidic protein, vimentin, and ERK2 expression in astroglial cell cultures*

56. **Iwata K., Kunimura Y., Ozawa H. (Japan)** *Expression of androgen receptor in kisspeptin neurons of female rats*

57. **Johansson M., Månsson M., Lins L.-E., Scharschmidt B., Dooverskog M., Bäckström T. (Sweden)** *GR3027 antagonizes the effect of an allopregnanolone-challenge in humans*

58. **Nampoothiri L.P., Chaudhari N.K. (India)** *Altered neuroendocrine milieu as the basis of polycystic ovarian syndrome (PCOS) pathology*

59. **Rasic-Markovic A., Hrncic D., Rankov-Petrovic B., Susic V., Stanojlovic O. (Serbia)** *Analgesic properties of allopregnanolone isomers*

60. **Romano S., Diviccaro S., Pesaresi M., Giatti S., Mitro N., Caruso D., Melcangi R.C. (Italy)** *Short term effects of diabetes in the rat brain: focus on neuroactive steroids, cholesterol homeostasis and mitochondria functionality*


62. **Trova S., Oboti L., Schellino R., Marraudino M., Zhang A., Harris N.R., Olubukola A.M., WeiHong L., Peretto P. (Italy)** *Reorganization of accessory olfactory circuits driven by mating signals at puberty*
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