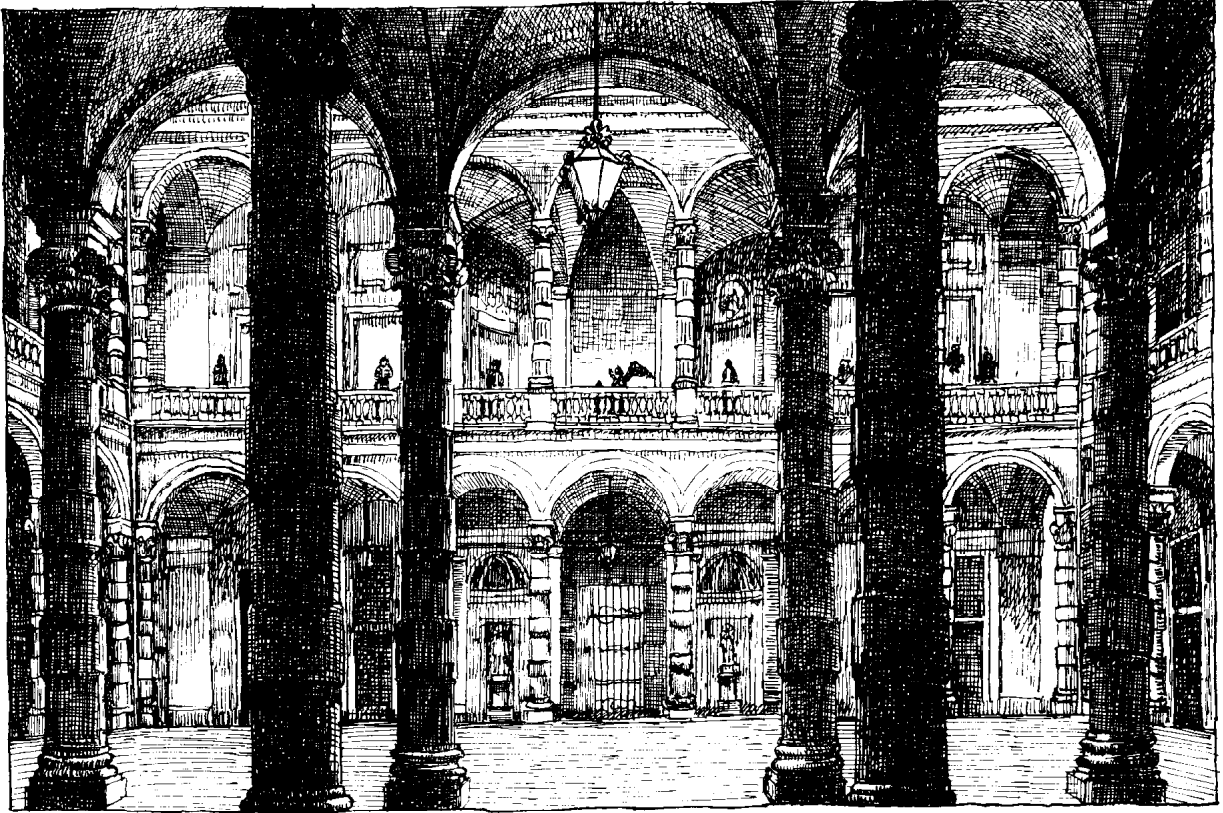


# V<sup>TH</sup> INTERNATIONAL CONFERENCE ON HORMONES, BRAIN, AND BEHAVIOR TORINO (ITALY) August 25-30 1996

E. BORELLO



UNIVERSITY OF TORINO, HONOUR COURT.

## PROGRAMME



VILLA GUALINO

Viale Settimio Severo 63

**Conference organized under the patronage of**

Commission of the European Communities

Regione Piemonte

Provincia di Torino

Università di Torino

CNR

Società Italiana di Neuroscienze

Società Italiana di Anatomia

**5th INTERNATIONAL CONFERENCE ON  
HORMONES, BRAIN AND BEHAVIOR**

**Torino, Italy  
August 25-30, 1996**

**FINAL ANNOUNCEMENT AND  
REGISTRATION FORMS**



# CONFERENCE ORGANIZATION

## International Scientific Committee

Gregory F. Ball (Baltimore)  
Jacques Balthazart (Liège)  
Francesco Dessì Fulgheri (Firenze)  
GianCarlo Panzica (Torino)  
Jean P. Signoret (Tours)  
Rae Silver (New York)

## Local Organizing Committee

G.C. Panzica      President  
J. Balthazart  
A. Fasolo  
L. Verzé  
C. Viglietti-Panzica

## Address for Correspondence

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## GENERAL INFORMATION

### Location of the Meeting

The conference will be held in **Torino** (Turin) at

**Villa Gualino (viale Settimio Severo 63, I-10133 TORINO)**

Tel. +39 (0) 11 6603555 Fax +39 (0) 11 6603535

### Bus service

There is a public bus service (running hourly in the morning, each 30 min in the afternoon till midnight), the line is number **73**. The bus is starting from Piazza Gran Madre. Bus stop for easy connection: corso Fiume. This bus stop can be reached by the bus number **52** (Piazza Statuto, Porta Susa, Porta Nuova, corso Vittorio, corso Fiume).

Registered participants will be entitled of one weekly pass for all downtown transports (bus and tram). This pass is valid from Monday 26 to Sunday 1 september, only in town.

A shuttle bus organized by the Conference will leave on the morning from Piazza Arturo Graf (via Madama Cristina) at 8 a.m. The bus will have a stop at the corner via Nizza/corso Vittorio Emanuele (left side of Porta Nuova) at 8.15 a.m. This stop is in front to the Hotel Genio and close to the Hotel Sitea. Buses will be available at the end of the scientific sessions in the evening (7 p.m. from Villa Gualino).

### Conference Desk

A conference desk will be opened at Villa Gualino throughout the conference starting August 25 at 2 p.m. The desk will be open every day afterwards from 8.30 a.m. until 7 p.m until August 29. Whereas the August 30 the conference desk will be open only until 2 p.m.

### Registration fees (payment must be in italian lire)

<b>Full registration</b>	<b>300,000 Lit</b>
<b>One day registration</b>	<b>50,000 Lit plus 20,000 for the abstract book</b>
<b>Two-days registration</b>	<b>90,000 Lit (including the abstract book)</b>

*The fee for registered participants includes:*

- Access to the scientific events of the meeting
- Abstract book
- Coffee breaks
- Welcome cocktail (Sunday afternoon at Villa Gualino)
- Cocktail offered by the Provincia of Torino (Monday evening)
- Weekly pass for public transportation in Torino
- Shuttle-bus from Torino to Villa Gualino and viceversa (morning/evening)

## **Lunches**

Two options will be available at Villa Gualino: either a full meal can be purchased from the restaurant buying meals tickets at the conference desk at least one day in advance (20,000 Lit). Alternatively, a snack bar will be available at the exhibition which takes place in the garden of the Villa (Experimenta) and it will be possible to purchase there light food (cold and hot dishes) and drinks.

In the evening, the city of Torino offers a wide variety of restaurants serving excellent Italian food and other international "cuisines". You will be on your own for this selection but we will provide you detailed information about locations and prices at the conference desk.

## **PUBLICATION**

### ***Abstracts***

The abstracts of all invited lectures, free communications and posters will be gathered in a booklet that will be distributed free to all participants. This book is registered as a supplementum of the *Italian Journal of Anatomy and Embryology*, the official journal of the Italian Society of Anatomy. Additional copies of this booklet can be purchased at the conference desk at the price of 20,000 Lit. (about 13 US \$). Abstract books will be provided only at the conference desk and will not be mailed after the conference.

### ***Proceedings of the invited lectures***

The text of invited lectures will be published as a special issue (composed of two parts) of Brain Research Bulletin (Elsevier Publ.). This special issue will be supplied at special price (about 50 US\$ per collection, i.e., the 2 parts). Order forms will be available during the conference.

## **Social Events**

- **Sunday, August 25th 5-7 p.m.** A welcoming reception will take place at Villa Gualino. Drinks and snacks will be provided.
  
- **Monday, August 26th 7.30 p.m.** A cocktail will be offered by the government of the Provincia of Torino at Palazzo Cisterna (via Maria Vittoria). A visit of the painting exhibition of the Palace will follow.
  
- **Tuesday, August 27th 8.30 p.m.** A night visit at the Castle of Venaria (a small town very close to Torino) will be organized. The price for the night visit of the castle is 20,000 It.L. Departure time 8.30 p.m. from Villa Gualino.
  
- **Thursday, August 29th 4.30 p.m.** A visit to the Royal Hunting House of Stupinigi will be organized. Departure time 4.30 p.m. from Villa Gualino. After the visit of the palace the social banquet will be held in a small village (Avigliana) close to a lake and near Torino (Ristorante Hermitage). A selection of fine italian cooking will be served. The price for this dinner is not included in the registration fees and will be 60.000 Lit. (about 40 US\$). Tickets will be available at the conference desk only for those who have booked in advance.

## **PRESENTATION OF PAPERS**

### **Presentation of poster**

Posters will be on display during the entire conference. A specific time when no oral communications will take place is reserved for poster viewing and discussion. Size of poster boards is 90 cm horizontal by 200 cm vertical. Posters will have to be mounted with sticky tape. Material for the mounting will be provided by the Congress staff during the set-up of the posters.

### **Presentation of contributed oral communication**

Oral communications of 15 min (12 min presentation + 3 min discussion) concerning the main topics of the conference or directly related topics will be allowed.

A slide projector (5 x 5 cm) and an overhead projector will be available for all presentations. No other form of audiovisual presentation can be supported.

### **Invited lectures**

The program will also include a list of invited lectures (25 min presentation + 5 min discussion). These invited lectures are listed in the annexed programme. As is the case for the contributed oral communications, only a slide projector (5x5 cm) or an overhead projector will be available for these presentations.

Speakers should give their slides to the projectionist at least 15 min. before the starting time of their symposium. A slide viewer will be available in a separate place.

# CONFERENCE PROGRAM

## Sunday August 25

- 2-7 p.m. Registration of participants at Villa Gualino  
5-7 p.m. Welcome party

## Monday August 26

- 9 a.m.-1 p.m. **Sensory inputs and behavior** (Chairs: Guillamon and Baum)  
1-2.30 p.m. Posters' exhibition  
2.30-6 p.m. **Sex differentiation of brain and behavior** (Chairs: Arnold and Balthazart)  
6-7 p.m. Posters' exhibition

## Tuesday August 27

- 9 a.m.-1 p.m. **Neurochemistry of behavior** (Chairs: Boyd and Ball)  
1-2.30 p.m. Posters' exhibition  
2.30-4 p.m. Free discussion of Posters (Monday-Tuesday)  
4.30-6 p.m. **Brain steroid metabolism** (Chair Celotti and Adkins-Regan)  
6-7 p.m. Posters' exhibition

## Wednesday August 28

- 9-12 a.m. **Melatonin in the control of circadian and circannual systems**  
(Chairs: Gwinner, Micevych)  
12-2 p.m. Posters' exhibition  
2-6 p.m. **Central control of reproductive endocrinology** (Chairs: Sharp and Dittami)  
6-7 p.m. Posters' exhibition

## Thursday August 29

- 9-12 a.m. **Hormone-induced brain plasticity** (Chairs: Garcia-Segura and Maggi)  
12-2 p.m. Posters' exhibition  
2-4 p.m. Free discussion of Posters (Wednesday-Thursday)

## Friday August 30

- 9-12 a.m. **Chemical neuroanatomy of brain areas implicated in behavior** (Chairs: Herbison, McCarthy)

END OF THE CONFERENCE

## Monday 26 August

### 9.00 a.m. Symposium: Sensory inputs and behavior

(Chairs: A. Guillamon, Madrid & M.J. Baum, Boston)

9.00 - **Tobet S.A.** (Wartham, MA, USA) Gonadotropin-releasing hormone containing neurons and olfactory fibers during development: from lamprey to mammals (Tobet S.A., Sower S.A., Schwarting G.A.).

9.30 - **Kikuyama S.** (Tokyo, Japan) Female-attracting pheromone in newt cloacal glands (Kikuyama S., Yamamoto K., Hayashi H., Tanaka S., Toyoda F.).

10.00 - **Pfaus J.** (Montreal, Quebec, Canada) Implication of Fos induction in the brain following copulatory stimulation of female and male rats.

10.30-11.00 coffee break

11.00 - **Swann J.** (Newark, NJ, USA) Fos expression in the limbic system of the male Syrian Hamster: sex differences and role of the main and accessory olfactory systems (Swann J., Fiber J.).

11.30 - **Guillamon A.** (Madrid, Spain, EU) Sex differences in the vomeronasal system (Guillamon A., Segovia S.).

12.00 - **Tarozzo G.** (Torino, Italy, EU) Prenatal differentiation of mouse vomeronasal system. (Tarozzo G., Cappello P., De Andrea M., Walters E., Margolis F.L., Fasolo A.).

12.15 - **Sachs B.** (Storrs, CT, USA) Pheromonal induction of erection in male rats by inaccessible estrous females.

12.30 - **Stern J.** (New Brunswick, NJ, USA, read by P. Yahr) Role of the midbrain in periaqueductal gray matter in nursing behavior and maternal aggression in Long Evans rats. (Lonstein J.S., Stern J.M.).

12.45 - **Bialy M.** (Warsaw, Poland) Acquisition of sexual experience in male rats: changes in c-fos expression and ultrasonic vocalization in the 50 kHz band. (Bialy M., Rydz M., Nikolaev E., Beck J., Kaczmarek L.).

### 1.00-2.30 p.m. Lunch time - Posters' exhibition

### 2.30 p.m. Symposium: Sex differentiation of brain and behavior

(Chairs: A. Arnold, Los Angeles, & J. Balthazart, Liège)

2.30 - **Adkins-Regan E.** (Ithaca, NY, USA) Organizational actions of sex hormones in birds.

3.00 - **Arnold A.P.** (Los Angeles, CA, USA) Do non-hormonal factors influence sexual differentiation of the brain in zebra finches?

3.30 - **Baum M.J.** (Boston, MA, USA) Motivational consequences of brain sexual differentiation.

4.00 - **McCarthy M.M.** (Baltimore, MD, USA) Excitatory neurotransmission and sexual differentiation of the brain (McCarthy M.M., Davis A.M., Mong J.A.).

4.30-5.00 Coffee break

5.00 - **Spratt D.P.** (Cambridge, United Kingdom, EU) The sexually dimorphic CGRP neurones of the preoptic area: functional investigation of a neural population implicated in the control of female reproductive behaviour (Spratt D.P., Herbison A.).

5.15 - **Lohmann R.** (Seewiesen, Germany, EU) Differential effects of syringeal muscle denervation on the development of its motonucleus (nXII) and premotonucleus (RA) and the consequences of song (Lohmann R., Gahr M.).

5.30 - **Nixdorf-Bergweiler B.** (Berlin, Germany, EU) Development of sex differences in the lateral magnocellular nucleus of the anterior neostriatum of the Zebra finch.

5.45 - **Casto J.M.** (Baltimore, MD, USA) Development and hormonal control of sex differences in the vocal control system of European starlings (Casto J.M., Ball G.F.).

### 6-7 p.m. Posters' exhibition

7. 10 p.m. Bus for downtown.

## Tuesday August 27

### 9.00 a.m. Symposium: Neurochemistry of behavior

(Chairs: S. Boyd, Notre Dame, & G.F. Ball, Baltimore)

- 9.00 - **Boyd S.** (Notre Dame, IN, USA) Vasotocin pathways in the bullfrog.  
9.30 - **Maggi A.** (Milano, Italy, EU) Estradiol and IGF-I differentiate SK-ER3 neuroblastoma cells to a dopaminergic phenotype (Maggi A., Agrati P., Patrone C.).  
10.00 - **Hull E.M.** (Buffalo, NY, USA) Testosterone, preoptic dopamine, and copulation in male rats (Hull E.M., Du J., Lorrain D.S., Matuszewich).

10.30-11 Coffee break

- 11.00 - **Vergoni A.V.** (Modena, Italy, EU) Stress neuropeptides and animal behavior (Vergoni A.V., Poggioli R., Bertolini A.).  
11.30 - **Kendrick K.M.** (Cambridge, United Kingdom, EU) Neural control of maternal behaviour and olfactory recognition of offspring  
12.00 - **Rosenblatt J.S.** (Newark, NJ, USA) Progressive changes in responsiveness to estrogen stimulation of maternal behavior during pregnancy in the rat. (Rosenblatt J.S., Siegel H.I., Olufowobi A.).  
12.15 - **Coolen L.** (New Haven, CT, USA) Dual testosterone stimulation of medial amygdala and medial preoptic area fails to amplify sexual behavior in the male Syrian hamster. (Coolen L.M., Wood R.I.).  
12.30 - **Huber R.** (Graz, Austria, EU) Serotonin alters motivational aspects of aggression.  
12.45 - **Steimer T.** (Geneve, Switzerland) Behavioural correlates of emotional reactivity to a novel environment in genetically-selected rat lines which differ in hypothalamo-pituitary-adrenal (HPA) axis sensitivity.

1.00-2.30 p.m. Lunch time - Posters' exhibition

2.30 - 4.30 p.m. Free discussions of posters exhibited on Monday and Thursday  
coordinated by A. Arnold, S. Boyd, F. Celotti, A. Guillaumon.

### 4.30 p.m. Symposium: Brain Steroid Metabolism

(Chair: F. Celotti, Milano, & E. Adkins-Regan, Ithaca)

- 4.30 - **Celotti F.** (Milano, Italy, EU) Testosterone metabolism in the mammalian brain (Celotti F., Negri-Cesi P., Poletti A.).  
5.00 - **Roselli C.E.** (Portland, OR, USA) Regulation of aromatase gene expression in the rat brain (Roselli C.E., Abdelgadir S.E., Resko J.A.).  
5.30 - **Schlinger B.** (Los Angeles, CA, USA) Evolution of steroid-metabolizing enzyme expression in the avian brain.  
6.00 **Poletti A.** (Milano, Italy, EU) Gene expression of the 5 $\alpha$  reductase in the rat brain. (Poletti A., Negri-Cesi P., Rabuffetti M., Celotti F., Martini L.)

6-7 p.m. Posters' exhibition

7. 10 p.m. Bus for downtown.

## Wednesday August 28

### 9.00 a.m. Symposium: Melatonin in the control of circadian and circannual systems

(Chair: E. Gwinner, Andechs, & P. Micevych, Los Angeles)

9.00 - **Gwinner E.** (Andechs, Germany, EU) Melatonin in the control of avian circadian rhythms.

9.30 - **Malpoux B.** (Nouzilly, France, EU) Control of circannual rhythm of reproduction by melatonin secretion in the ewe (Malpoux B., Thiéry J.-C., Chemineau P.).

10.00 - **Stankov B.M.** (Milano, Italy, EU) The expression of the melatonin receptor in the human brain.

10.30 - **Nelson R.J.** (Baltimore, MD, USA) Role of melatonin in mediating seasonal energetic and immunologic adaptations.

11.00-11.30 Coffee break

11.30 - **Van't Hof T.** (Andechs, Germany, EU) Circadian variation in zebra finch (*Poephila guttata*) gastrointestinal tract melatonin (T.J. Van't Hof and E. Gwinner).

11.45 - **Skinner D.** (Cambridge, United Kingdom, EU) Melatonin in third ventricular cerebrospinal fluid: temporal relationship with melatonin concentrations in Jugular plasma (Skinner D.C., Maurice-Mandon F., Malpoux B.).

### 12.00-2.00 p.m. Lunch time - Posters' exhibition

### 2.00 p.m. Symposium: Central control of reproductive endocrinology

(Chair: P.J.Sharp, Edinburgh, & J.Dittami, Wien)

2.00 - **Sharp P.J.** (Roslin, United Kingdom, EU) Central control of incubation behaviour in birds (Sharp P.J., Lea R.W.).

2.30 - **Ottinger M.A.** (College Park, MD, USA) Neuroendocrine regulation of GnRH and behavior during aging (Ottinger M.A., Thompson N., Panzica G.C., Viglietti-Panzica C.).

3.00 - **Rissman E.F.** (Charlottesville, VA, USA) Behavioral regulation of GnRH production.

3.30-4.00 Coffee break

4.00 - **Lehman M.N.** (Cincinnati, OH, USA) The GnRH system of seasonal breeders: anatomy and plasticity (Lehman M.N., Goodman R., Karsch F., Berriman S.J., Jansen H.T.).

4.30 - **Silver R.** (New York, NY, USA) Brain mast cells (Silver R., Zhuang X., Silverman A.-J.).

5.00 - **Ball G.F.** (Baltimore, MD, USA) GnRH plasticity and seasonal reproduction in birds (Ball G.F., Hahn T.P., Balthazart J.).

5.15 - **Bernard D.** (Evanston, IL, USA) Long days stimulate rapid changes in the hypothalamo-pituitary-gonadal axis of Siberian Hamsters (Bernard D.J., Horton T.H., Nussbaum R., Porkka-Heiskanen T., Turek F.W.).

5.30 - **Broglio F.** (Torino, Italy, EU) Influence of age and sex on the GH-releasing activity of hexarelin, a synthetic hexapeptide, in humans. (Broglio F., Arvat E., Gianotti L., Bellone J., Ramunni J., Aimaretti G., DiVito L., Maccagno B., Deghenghi R., Camanni F., Ghigo E.).

5.45 - **Maggi R.** (Milano, Italy, EU) Prozac receptors on LHRH-producing neuronal cells; do endothelial cells influence neurons activity? (Maggi R., Pimpinelli F., Capra V., Rovati G.E., Martini L., Piva F.).

### 6-7 p.m. Posters' exhibition

7. 10 p.m. Bus for downtown.

## Thursday August 29

### 9.00 a.m. Symposium: Hormone-induced brain plasticity

(Chairs: L.M. Garcia Segura, Madrid, & A.Maggi, Milano)

9.00 - **Calzà L.** (Modena, Italy, EU) Thyroid hormone induced brain plasticity during adulthood.

9.30 - **Matsumoto A.** (Tokyo, Japan) Hormonally induced neuronal plasticity in the adult brain.

10.00 - **Garcia-Segura L.M.** (Madrid, Spain, EU) Role of astroglia in gonadal hormone-dependent synaptic plasticity (Garcia-Segura L.M., Fernandez-Galaz M.C., Chowen J.A., Torres-Aleman I., Naftolin F.).

10.30 - **Melcangi R.C.** (Milano, Italy, EU) Astrocyte-neuron interactions in vitro: role of growth factors and steroids on LHRH dynamics.

11.00-11.30 Coffee break

11.30 - **Clayton N.S.** (Davis, CA, USA) Memory and hippocampal plasticity in food storing birds: effects of food-storing and photoperiod.

11.45 - **King J.C.** (Boston, MA, USA) Confocal microscopy reveals dynamic remodeling of LHRH terminals/tanycytic end-feet interactions in the median eminence of cycling female rats. (King J.C., Ronsheim P.M., Rubin B.S.).

### 12.00-2.00 p.m. Lunch time - Posters' exhibition

2.00 - 4.00 p.m. Free discussions of posters exhibited on Wednesday and Thursday coordinated by L.M. Garcia-Segura, E. Gwinner, A. Herbison, P.J. Sharp.

4.30 p.m. FREE EVENING (Tour to Stupinigi and Social Dinner)

## Friday August 30

### 9.00 a.m. Symposium: Chemical Neuroanatomy of brain areas implicated in behavior

(Chairs: A. Herbison, Cambridge, & M. McCarthy, Baltimore)

9.00 - **Gahr M.** (Seewiesen, Germany, EU) Developmental and hormone-dependent changes in the expression of gonadal steroid receptors in vocal control systems of songbirds (Gahr M., Metzdorf R., Schneid M.).

9.30 - **Herbison A.** (Cambridge, United Kingdom, EU) Identification and characterization of estrogen-receptive neurons involved in reproduction: preoptic GABA and brainstem noradrenaline neurons.

10.00 - **Micevych P.E.** (Los Angeles, CA, USA) Opiate regulation of estrogen-stimulated cholecystokinin mRNA in the limbic-hypothalamic circuit (Micevych P.E., Eckersell C.B., Holland K.L.).

10.30 - **Ceccatelli S.** (Stockholm, Sweden, EU) Plasticity of NO synthase expression in the neuroendocrine system.

11.00 - **Fusani L.** (Seewiesen, Germany, EU) Estrogen-dependence of vocal patterns in canaries. (L. Fusani, R. Metzdorf, A. Wozniak, J.B. Huchison, M. Gahr).

11.15 - **Dittami J.** (Vienna, Austria, EU) Oxytocin as a means or end to pair bonding: data from guinea pig (Dittami J., Wallner B., Barth R., Schams D.).

11.30 - **Millesi E.** (Vienna, Austria, EU) Effects of conflict behavior and lactational performance on reproductive decisions in female European ground squirrels (Millesi E., Dittami J., Huber S.).

### END OF THE MEETING

1.00 p.m. Bus for downtown.

## POSTERS' PROGRAM

Posters will be on display for the whole meeting. They can be mounted on Sunday afternoon and should be removed Thursday August 29 before 5 p.m.

The size of the poster board is 90 cm (width) for 200 cm (height).

Authors should stay at their poster during the lunch time and after the end of the afternoon lectures. Posters of days 26-27 will be discussed from 2.30-4.30 p.m. on Tuesday 27, posters of days 28-29 will be discussed from 2.00 to 4.00 p.m. on Thursday 29. These discussions are not so far prepared, if you want you can take with you 1 or 2 slides or transparencies to schematically illustrate your results. The discussions will be coordinated by the Chairs of the closest symposia.

## Monday 26 August

### Song System

26-1 **Beguín N.** (Villetaneuse, France, EU) Sexual responsiveness, hormonal concentrations and song preferences in female canaries (*Serinus canaria*) during the breeding cycle (Beguín N., Leboucher G., Kreutzer M.).

26-2 **Del Negro C.** (Nanterre, France, EU) Lesion of HVC alters the differential responsiveness of female canaries to different kinds of songs (Del Negro C., Gahr M., Halle F., Leboucher G.).

26-3 **Leboucher G.** (Nanterre, France, EU) Influence of male song on nest-building in female canaries (*Serinus canaria*): a reappraisal (Leboucher G., Depraz V., Kreutzer M.).

26-4 **Nespor A.** (College Park, MD, USA) Hormonal and neural basis of sex differences in adult vocal behavior in budgerigards (Nespor A.A., Dooling R.J., Ball G.F.).

26-5 **Briganti F.** (Firenze, Italy, EU) A tract-tracing study on the vocal control system of a non-oscine species (Briganti F., Panzica G.C., Persichella P., Beani L.).

### Brain structures controlling behavior

26-6 **Foidart A.** (Liège, Belgium, EU) Differential activation by copulation of FOS immunoreactivity in the brain of male and female quail (Foidart A., Meddle S.L., King V.M., Follett B.K., Wingfield J.C., Ramenofsky M., Balthazart J.).

26-7 **Van der Beek E.** (Wageningen, The Netherlands, EU) Sexually dimorphic activation of somatostatin neurons in the ventromedial and dorsomedial hypothalamus following sexual behavior (van der Beek E.M., Sannen K.J., Coolen L.M., Wiegant V.M.).

26-8 **Heeb M.M.** (Irvine, CA, USA) Cell-body lesions of either the posterodorsal preoptic nucleus or the posterodorsal medial amygdala disrupt sex behavior in sexually-experienced male gerbils (Heeb M.M., Yahr P.).

### Sex differences in behavior

26-9 **De Vries, A.C.** (College Park, MD, USA) Sex differences in pair bonding in monogamous prairie voles (De Vries, A.C., Carter C.S.).

26-10 **Gonzalez-Mariscal G.** (Panotla, Mexico) Brief mother-young contact maintains maternal behavior in rabbits (Gonzales-Mariscal G., Melo A.I., Chirino R., Beyer C., Rosenblatt, J.S.).

26-11 **Wauters A.-M.** (Rennes, France, EU) Effect of stimuli from chicks on the expression of incubating and maternal behaviour and on plasma prolactin, luteinizing hormone and oestradiol in incubating hens (M.-A. Richard, A.-M. Wauters).

26-12 **Veney S.L.** (Charlottesville, VA, USA) Co-localization of estrogen receptor and aromatase enzyme immunoreactivities in adult mammalian brain (Veney S.L., Rissman E.F.).

26-13 **Branchi I.** (Roma, Italy, EU) Developmental exposure to atmospheric ozone affects paw preference in female but not in male CD-1 mice (Alleva E., Amorico L., Branchi I., Chiarotti F.).

The authors of posters 26-1 to 26-13 will exhibit their posters at lunch time (1.00-2.30 p.m., and after the end of the afternoon session). A free discussion on these posters will be organized on Tuesday August 27 (2.30-4.30).

## Tuesday August 27

### Neurochemistry of behavior

- 27-1 **Castagna C.** (Torino, Italy, EU) Effects of vasotocin on sexual behavior and crowing in male Japanese quail (Castagna C., Balthazart J.).
- 27-2 **Delago A.** (Graz, Austria, EU) Prozac, serotonin and aggression in crayfish, *Astactus astactus* A (Delago A., Hörtnner M., Huber R.).
- 27-3 **Jurkevich A.** (Vilnius, Lithuania) Behavioural effects of TRH in cockerels with different levels of aggressiveness in intermale conflicts.
- 27-4 **Zerani M.** (Camerino, Italy, EU) Sexual behaviour and brain nitric oxide in the urodele crested newt (*Triturus cristatus*).
- 27-5 **Foran C.** (Ithaca, NY, USA) Arginine vasotocin neurons in a polymorphic teleost: age and sex comparisons (Foran C.M., Bass A.H.).
- 27-6 **Baillien M.** (Liège, Belgium, EU) Control of tyrosine hydroxylase activity in the preoptic area of the quail brain (Baillien M., Balthazart J.).
- 27-7 **Patrone C.** (Milano, Italy, EU) Mechanism and functional relevance of insulin-dependent activation of estrogen receptor in neuroblastoma cells (Patrone C., Agrati P., Maggi A.).
- 27-8 **Valetto M.R.** (Torino, Italy, EU) Age-related variations of cholinergic influences on GH secretion in Down's syndrome (Valetto M.R., Arvat E., Gianotti L., Aimaretti G., Ramunni J., Ragusa L., Romano C., Cappa M., Colabucci F., Ghigo E.).
- 27-9 **Fernandez-Lopez A.** (Leon, Spain, EU) Autoradiographic study of the chick brain ontogeny using (3H)CGP 12177. (Revilla R., Revilla V., Gonzalez-Caballero N., Fernandez-Lopez, A.).

### Environment and behavioral states

- 27-10 **Cirulli, F.** (Roma, Italy, EU) Mast cell activation following intermale aggressive behaviour in adult male mice: NGF as a mediator between behavioural states and immune system activation (Alleva E., Cirulli F., De Acetis L., Micera A., Manni L., Aloe L.).
- 27-11 **Klein S.** (Baltimore, MD, USA) Sex differences in immune function reflect the mating system and hormonal status of males (Klein S.L., Nelson R.J.).

The authors of posters 27-1 to 27-11 will exhibit their posters at lunch time (1.00-2.30 p.m., and after the end of the afternoon session). A free discussion on these posters will be organized on Tuesday August 27 (2.30-4.30).

## Wednesday August 28

### Circadian-circannual rhythms

- 28-1 **Wallner B.** (Vienna, Austria, EU) Attractiveness: a positive endocrine and social marker in female barbary macaques daily life (Wallner B., Dittami J.).
- 28-2 **Lumineau S.** (Rennes, France, EU) Induction of circadian rhythm by testosterone implant in castrated Japanese quail (Lumineau S., Guyomarc'h C., Richard J.-P.).
- 28-3 **Driscoll P.** (Zurich, Switzerland) Differential circadian patterns of food intake in two psychogenetically selected lines of rats (Rossi, P., Driscoll, P., Langhans, W.).

### GnRH

- 28-4 **Bailhache T.** (Rennes, France, EU) Steroid feedback on the SGNRH neuronal system of the rainbow trout (Bailhache T., Linard B., Anglade I., Pakdel F., Saligaut C., Kah O., Jago P.).
- 28-5 **Görke A.** (Hannover, Germany, EU) Native isolation and detection systems for alterations in gonadotropin isoform patterns.
- 28-6 **Haywood S.** (Cambridge, United Kingdom, EU) Analysis of temporal changes in GnRH mRNA during proestrous and dioestrous in the diagonal band of Broca (DBB) and preoptic area (POA) of the female rat (Haywood S.A., Herbison A.E., Bicknell R.J.).
- 28-7 **Pinelli C.** (Napoli, Italy, EU) Gn-RH-immunoreactive neuronal system in the brain of *Ichthyophis beddomei* (amphibia: gymnophiona) (Pinelli C., Fiorentino M., D'Aniello B., Calace P., Bhat G.K., Rastogi R.K.).
- 28-8 **Rastogi R.K.** (Napoli, Italia, EU) Reproductive status-related mammalian and chicken II GnRH content in the brain and pituitary of *Rana esculenta* (Rastogi R.K., King J.A., Di Fiore M.M., D'Aniello B., Napolitano A., Pinelli C.).

### **Sex Differences in brain structures**

28-9 **Facciolo R.M.** (Arcavacata di Rende, Italy, EU) Sexual differential binding features of benzodiazepine subtypes in some vertebrate forebrain regions (Facciolo R.M., Tavolaro R., Alò R., Carelli A., Canonaco M.).

28-10 **Simonian, S.X.** (Cambridge, United Kingdom, EU) Development of sex differences in hypothalamic periventricular somatostatin neurones (Simonian S.X., Herbison A.E.).

28-11 **Garcia-Ojeda E.** (Salamanca, Spain EU) Sexual dimorphic expression of nitric oxide synthase in the rat Accessory Olfactory Bulb (Garcia-Ojeda E., Rossi M.C., Crespo C., Arevalo R., Alonso J.R., Panzica G.C.).

28-12 **Panzica, G.C.** (Torino, Italy, EU) Sexual differences in melatonin-binding sites in quail prosencephalon and mesencephalon (Panzica G.C., Cartello P., Nonno R., Lucini V., Fraschini F., Stankov B.).

28-13 **Aste, N.** (Torino, Italy, EU) Sexual dimorphism of vasotocinergic structures in quail nucleus of stria terminalis (Aste N., Viglietti-Panzica, C., Mühlbauer E., Grossmann R., Panzica G.C.).

The authors of posters 28-1 to 28-14 will exhibit their posters at lunch time (1.00-2.30 p.m., and after the end of the afternoon session). A free discussion on these posters will be organized on Thursday August 29 (2.00-4.00).

## **Thursday August 29**

### **Steroid hormones effects on neural circuitries**

29-1 **Obole A.** (Torino, Italy, EU) Effects of Testosterone on the ultrastructural of neurons and neuropile of the medial preoptic nucleus of male Japanese quail (Obole A., Castagna C., Aste N., Viglietti-Panzica C., Balthazart J., Panzica G.C.).

29-2 **Keast J.** (Brisbane, Australia) Testosterone has potent effects on the peripheral neural circuitry mediating pelvic autonomic reflexes (Keast J., Bauer M., Saunders R.).

29-3 **Frye C.A.** (New London, CT, USA) Progesterone have a membrane-mediated action in rat midbrain for facilitation of sexual receptivity that is likely GABA mediated.

29-4 **Lee D.W.** (Davis, CA, USA) Short- and long-term memory formation for a spatial learning task in food-storing and non-storing birds (Lee D.W., Clayton N.S.).

29-5 **Dermon C.** (Iraklion, Greece, EU) Sex differences in local cerebral protein synthesis activity in quail as revealed by the in vivo autoradiographic <sup>14</sup>C-leucine method (Stamatakis A., Balthazart J., Dermon C.).

### **Chemical neuroanatomy of neuroendocrine areas**

29-7 **Ahlbom E.** (Stockholm, Sweden, EU) Expression of the BCL-2 family in neuroendocrine relevant areas (Ahlbom E., Ceccatelli S.).

29-8 **Sánchez Hernandez F.** (Salamanca, Spain, EU) Morphometric study of the NADPH-Diaphorase and vasopressin neurons of the paraventricular nucleus of the hypothalamus following adrenalectomy (Sanchez F., Rubio M., Hernandez V., Santos M., Carrettero J., Moreno M.N., Vazquez R.).

### **Aromatase**

29-9 **Hutchinson RE** (Cambridge, United Kingdom, EU) Female odours affect behaviour and brain aromatase activity in male gerbils (Hutchison R.E., Zimmermann E., Hutchison J.).

29-10 **Tlemçani-Moussbir, O.** (Liège, Belgium, EU) A three dimensional study of testosterone-sensitive and sexually dimorphic aromatase-immunoreactive cells in the quail preoptic area (Balthazart J., Tlemçani O., Harada N.).

29-11 **Wozniak A.** (Cambridge, United Kingdom, EU) Characterisation of brain-derived inhibitors of aromatase (Wozniak A., Hutchison R.E., Hutchison J.).

The authors of posters 29-1 to 29-11 will exhibit their posters at lunch time (12.00-2.00 p.m.). A free discussion on these posters will be organized on Thursday August 29 (2.00-4.00).

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