

IV THEMATIC SYMPOSIUM "FRONTIERS IN PHYSIOLOGICAL SCIENCE"
Department of Physiology and Biophysics
Institute of Biomedical Sciences
University of São Paulo

SCIENTIFIC PROGRAM

Wednesday, July 29

08:30h **Welcome and opening**
Fabio Bessa Lima
Head Dept. of Physiology and Biophysics, ICB/USP

Session I - Renal System and Biophysics
Chairperson Antonio Carlos Cassola, ICB/USP

09:00h **What animal toxins can teach us about the molecular physiology of sodium channels**
Paulo Sérgio Lacerda Beirão, UFMG

10:00h **The new(est) genomics revolution**
Sandro J. de Souza, Ludwig Institute for Cancer Research

10:30h Interval

11:00h ***PKD1* haploinsufficiency increases renal damage and leads to microcyst formation following ischemia/reperfusion in mice**
Luiz Fernando Onuchic, FMUSP

11:30h **The kidney in infectious diseases: renal pathophysiological aspects**
Antonio Carlos Seguro, FMUSP

12:00h Discussion

12:30 Lunch

Session II - Cardiovascular System
Chairperson Lisete Compagno Michelini, ICB/USP

14:00h **Cardiovascular hormone systems in physiology and pathophysiology: Lessons from genetically altered animal models**
Michael Bader, Max-Delbrück Center for Molecular Medicine (MDC), Berlin-Buch, Germany

15:00h **Dissecting the functional significance of the neurovascular unit in the brain**
Jessica Filosa, Dept. of Physiology, Medical College of Georgia, USA

15:30h Interval

16:00h **Updated view of the rennin-angiotensin-system**
Robson A. Souza dos Santos, ICB/UFMG

16:30h **Stem cell therapy for systemic arterial hypertension**
Valdo Jose Dias Silva, UFTM, Uberaba, MG

17:00h **Discussion**

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Session III - Neuroscience

Chairperson Andréa da Silva Torrão , ICB/USP

09:00h **Segmental genetic aspects in the structure of functional columns of the brain**

Luis Puelles, Univ. of Murcia, School of Medicine and CIBERER U736
(Murcia, Spain)

10:00h **Neural differentiation is followed by aneuploidy in pluripotent stem cells (and vice-versa)**

Stevens Rehen, ICB, UFRJ

10:30h Interval

11:00h **Not that special: the human brain as a linearly scaled-up primate**

Suzana Herculano-Houzel, UFRJ

12:00h Discussion

12:30h Lunch

Session IV - Endocrine System

Chairperson Fabio Bessa Lima, ICB/USP

14:00h **Deiodinases allow for tissue-specific control of thyroid hormone action**

Antonio Carlos Bianco, Div.Endocrinology, Diabetes and Metabolism,Univ. Miami Miller, School of Medicine, USA

15:00h **Use of genetic tools to identify hypothalamic sites of leptin action on reproductive control.**

Carol Fuzeti Elias, Div.Hypothalamic Research, Dept. Internal Medicine,Univ. Texas Southwestern Medical Center, Dallas, Texas

15:30h Interval

16:00h **Mitochondrial dysfunction in genetically hyperlipidemic mice**

Anibal Vercesi, UNICAMP

17:00h Discussion

17:30h **Closing remarks**

Rui Curi
Director Institute Biomedical Sciences, USP