



## Annual meeting of the Israel Society for Physiology & Pharmacology (ISPP)

Ma'ale Hachamisha, Thursday, December 9, 2010

### PROGRAM OUTLINE

- 08:30-09:30**      **Registration & Refreshments (posters hang up)**
- 09:30-11:10**      **Morning Sessions A and B**
- 11:10-11:30**      **Coffee Break**
- 11:30-12:45**      **Student oral presentation competition**  
**(Please see important note on the last page)**
- 12:45-13:35**      **LUNCH**
- 13:35-13:45**      **Business Meeting**

**13:45-14:45**      ***The Magnes Plenary Lecture***  
**Prof. Ehud Isacoff**  
*University of California, Berkeley*  
**Title: "Lighting Up the Nervous System"**

**14:45-15:30**      **Poster session (see important note on the last page)**

**15:30-17:10**      **Afternoon Sessions C and D**

**17:10-17:20**      **Coffee Break**

**17:20-17:30**      **Ceremony Awarding the Winners of  
Poster and Student Lecture Competitions**

## **PRELIMINARY PROGRAM**

**9:30-11:10**      **Morning Sessions A and B**

**Session A: “Molecular Signaling Networks: Function and Disease” (Hall A)**

**Chairs: Nathan Dascal (Tel-Aviv University) and Mira Barda-Saad (Bar-Ilan University)**

**Varda Shoshan-Barmatz (Ben-Gurion University):** Mitochondrial protein VDAC1: From apoptosis regulation to cancer therapy.

**Nathan Dascal (Tel-Aviv University):** Modes of coupling between GPCRs, G proteins and effectors: the case of G protein-coupled K<sup>+</sup> channel (GIRK).

**Mira Barda-Saad (Bar-Ilan University):** Formation of molecular signaling complexes critical for the immune response.

**Ronen Alon (Weizmann Institute):** The function of endothelial stored chemokines in immune cell migration across inflamed blood vessels.

**Yarden Opatowsky (Bar-Ilan University):** Structure, domain organization and different conformational states of stem-cell-factor induced KIT dimers.

**Session B: "Stem cells: from basic science to tissue engineering and therapeutic opportunities" (Hall B)**

**Chair: Lior Gepstein (Technion)**

**Lior Gepstein (Technion):** Induced pluripotent stem cells: implications for basic and applied cardiovascular research.

**Benny Dekel (Tel-Aviv University):** Identification of novel human renal stem/progenitor cells: relevance to cancer and regeneration.

**Yechiel Elkabetz (Tel-Aviv University):** Standardized neural stem cells for regenerative medicine: How to harness the full potential of neural rosettes?

**Dror Seliktar (Technion):** Injectable biopolymers for regenerative medicine applications.

**Yair Reisner (Weizmann Institute):** Embryonic pig pancreatic tissue for the treatment of diabetes.

**11:10-11:30      Coffee Break**

**11:30-12:45      Student oral presentation competition**  
Five students will be selected from the received abstracts and will compete for the best presentation (see note on the last page)

**12:45-13:35      LUNCH**

**13:35-13:45      Business Meeting**

**13:45-14:45      *The Magnes Plenary Lecture***

**Prof. Ehud Isacoff**

*University of California, Berkeley*

**Title: "Lighting Up the Nervous System"**

**14:45-15:30      Poster Session**

## **15:30-17:10      Afternoon Sessions C and D**

### **Session C: “From synapse to brain” (Hall A)**

**Chairs: Israel Nelken (Hebrew University) and Ilan Lampl (Weizmann Institute)**

**Noam Ziv** (*Technion*): To be announced.

**Ilan Lampl** (*Weizmann Institute*): Correlation of spontaneous and sensory evoked synaptic inputs of cortical neurons.

**Misha Tsodyks** (*Weizmann Institute*): Information processing in neural networks with short-term synaptic plasticity.

**Israel Nelken** (*Hebrew University*): Cortical dynamics of sensory processing: stimulus-specific adaptation and novelty detection.

**Amir Amedy** (*Hebrew University*): What do sensory deprivation studies teach us about brain organization and reorganization?

### **Session D: “Cell death and proliferation” (Hall B)**

**Chair: Adi Kimchi (Weizmann Institute)**

**David Wallach** (*Weizmann Institute*): Regulation of inflammation by the ‘apoptotic’ caspases.

**Eli Arama** (*Weizmann Institute*): A novel role for a caspase: the fly effector-like caspase Dcp-1 is an accelerator of apoptosis.

**Adi Kimchi** (*Weizmann Institute*): Studying the complexity of cell death by combining reductionist with systems levels approaches.

**Doron Ginsberg** (*Bar-Ilan University*): The transcription factor E2F: Balancing proliferation and apoptosis.

**Itamar Simon** (*Hebrew University*): Single cell analysis of cell cycle variability.

## **17:10-17:20      Coffee Break**

## **17:20-17:30      Ceremony Awarding the Winners of Poster and Student Lecture Competitions**

## **Instructions for writing an abstract**

Abstracts should not exceed one page and should be prepared with Microsoft Word using **Times New Roman** font, **1-line** spacing and **3-cm** margins.

**Title:** Centered; bold-faced letters of **13-point** size.

**Names of authors:** Centered; italic letters of **12-point** size. Please use superscript numbers to indicate the authors' affiliation institutions. Please underline the name of the presenting author.

**Affiliation institutions:** Centered; regular letters of **12-point** size.

**Text:** Regular letters of **12-point** size.

*Example:*

### **Effects of Early-Life Stress in Animal Models of Depression**

*Aron Weller<sup>1</sup>, Yoram Braw<sup>1</sup>, Rachel Maayan<sup>2</sup>, Avi Weizman<sup>2</sup>*

<sup>1</sup>Department of Psychology, Bar-Ilan University, Ramat-Gan, Israel

<sup>2</sup>Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel

Parental depression has been associated with impaired functioning of the hypothalamic pituitary-adrenocortical axis (HPA) in the offspring. Therefore, we analyzed the activity of this axis in preweanling pups belonging to two animal models of depression (Wistar-Kyoto [WKY] and Flinders Sensitive Line [FSL] rats). In addition to a normal growing condition, a mild chronic stress condition (reduced bedding in postnatal days 2-9) was used in order to elucidate the possible interaction between hereditary vulnerability and early life stress.

At postnatal day 17, two pups per litter were removed from the home cage, one was subjected to acute stress (exposure to an adult male rat) and the other was left undisturbed. Blood was collected and corticosterone was assayed by RIA. The results indicate that, while in normal growing conditions there were no differences between WKY and their Wistar strain controls, WKY pups, growing in the chronic stress condition, exhibited dramatically lower corticosterone. The WKY pups' hypo-secretion of corticosterone echoes studies in humans indicating that early stress can lead to a hypocortisolism, a condition with possible effects on brain development, ability to handle stress and health. Compared to Sprague-Dawley strain controls, FSL pups were more resilient to early stress (no difference in corticosterone was found as a result of the early chronic stress). In addition, only Wistar/WKY rats showed an increase in corticosterone as a result of an acute stress, suggesting lower overall stress reactivity in the SD/FSL lines. The results provide insights into differences between the two models of depression and expand our knowledge on the interaction between hereditary factors and environmental conditions that lead to hypocortisolism in humans.

## **Important note:**

Students interested in submitting their work for the student oral presentation competition are requested to provide a recommendation letter from their mentor, which should be sent together with the abstract to: [secretary@ispp.org.il](mailto:secretary@ispp.org.il) or [paasyo@mail.biu.ac.il](mailto:paasyo@mail.biu.ac.il).

Five abstracts will be chosen by the organizing committee for oral presentation, and the presenters will compete for an award of **1,000 USD**.

The award for the best poster is **500 USD**. Abstracts of the posters should also be sent to: [secretary@ispp.org.il](mailto:secretary@ispp.org.il) or [paasyo@mail.biu.ac.il](mailto:paasyo@mail.biu.ac.il).

**Deadline for Abstract Submission: November 8, 2010.**

### **The Organizing Committee:**

Bernard Attali, President, *Tel-Aviv University*; Asher Shainberg, Past President, *Bar-Ilan University*; Eran Gilat, *I.I.B.R, Ness-Ziona*; David Lichtstein, *The Hebrew University*; Arie Moran, *Ben-Gurion University*; Eitan Reuveny, *Weizmann Institute*; Kobi Rosenblum, *Haifa University*; Inna Slutsky, Treasurer, *Tel-Aviv University*; Yoav Paas, Secretary, *Bar-Ilan University*.