

Poster presentation

1. Abnormally-enhanced emotional reactions among individuals at high risk of developing hypertension.

Avigail Wiener¹, Jan Mehnert², Zohar Biber¹ and Hadas Okon-Singer¹

1. Psychology, University of Haifa
2. Max Planck Institute for Human Cognitive and Brain Sciences

2. The effect of emotion regulation on empathic accuracy.

Navot Naor, Simone Shamay-Tsoory, Hadas Okon-Singer
Psychology, University of Haifa

3. Extracellular matrix involvement in the consolidation of fear memory during sleep: Implications for PTSD and phobia.

Fahed Hakim, Hilla Azulay Debbie and Asya Rolls
Immunology, Rapaport Institute of Medical Research, The Technion

4. The role of fibroblast growth factor 2 (FGF2) in alcohol addiction.

Oren Even-Chen, Ohad Shaham and Segev Barak
School of Psychological Sciences, Tel Aviv University

5. A brain imaging study into nicotine-induced dopamine release in cigarette smokers in treatment with bupropion using [¹¹C] raclopride in Positron Emission Tomography (PET).

Weinstein, A.M.^{1,2}, Greif, J.², Yemini, Z.², Freedman, N.¹, Mishani, E.¹, Weizman, A.³, Ebstein, R.⁴, Chisin, R.¹, Bocher, M.¹

1. Nuclear Medicine, Hadassah Hebrew University Medical Center
2. Lung Institute, Sourasky Medical Center
3. Geha Hospital and Sackler Faculty of Medicine, Tel Aviv University
4. Scheinfeld Center for Genetic Studies in the Social Sciences, Hebrew University

6. Subjective and objective pain indicators among individuals with cerebral palsy and intellectual disability.

Tali Benromano, Chaim G. Pick and Ruth Defrin
Anatomy and Physical Therapy, Sackler Faculty of Medicine and Sagol School of Neuroscience, Tel Aviv University

7. The effect of epilepsy on cerebral folate carriers.

Aniv Mann¹, Emma Portnoy¹, Dana Ekstein², Miri Shmuel¹, Dorrit Inbar², Tamir Ben Hur², Sara Eyal¹

Institute for Drug Research, School of Pharmacy, Hebrew University
Neurology, Hadassah Hebrew University Medical Center

8. Alzheimer's disease-causing proline substitutions lead to presenilin 1 aggregation and malfunction.

Tziona Ben-Gedalya¹, Lorna Moll¹, Michal Bejerano-Sagiel, Tal Burstyn-Cohen², Friedmann-Morvinski Dinorah³, Samuel Frere⁴, Inna Slutsky, Wayne A. Cabral⁵, Joan C. Marini⁵ and Ehud Cohen^{1*}

1. Biochemistry and Molecular Biology, the Institute for Medical Research Israel-Canada (IMRIC), Hebrew University Medical School
2. Institute of Dental Sciences, Hebrew University-Hadassah School of Dental Medicine,
3. Biochemistry and Molecular Biology, Tel Aviv University
4. Physiology and Pharmacology, Sackler Faculty of Medicine, Tel Aviv University
5. Bone and Extracellular Matrix Branch, NICHD, NIH, Bethesda, MD, USA

9. Unfilled hole in the V1 representation of a pure color surface.

Shay Zweig¹, Robert M Shapley², Hamutal Slovin¹

1. The Gonda Multidisciplinary Brain Research Center, Bar-Ilan University
2. Center for Neural Science, New York University

10. A novel voltage sensor in the orthosteric binding site of the m2-muscarinic receptor.

Ofra Barchad-Avitzur^{1,2}, Michael F. Priest³, Noa Dekel¹, Yehudit Botschko¹, Francisco Bezanilla³, Hanna Parnas¹, Yair Ben-Chaim²

1. Neurobiology, Institute of Life Sciences, Hebrew University
2. Natural and Life Sciences, The Open University of Israel
3. Biochemistry and Molecular Biology, University of Chicago

11. A perturbational approach to study brain networks' stability.

Nava Levit Binnun, Jodie Feil-Naim, Dominick Fresche, Yossi Arzouan
Psychology, Interdisciplinary Center, Herzliya

12. The effects of training protocol on the perceptual learning of time-compressed speech and its generalization.

Yafit Gabay, Avi Karni, Keren Banai
Psychology, University of Haifa

13. Limits on integration in children: the concatenation of trained subsequences of movements into composite sequences as a specific experience-triggered skill.

Lilach Ashtamker and Avi Karni
Psychology, University of Haifa

14. Deciphering principles of biological learning systems through comparison between the octopus's visual and chemo-tactile, analogous, learning systems.

Shomrat T.^{1,2}, Turchetti-Maia A. L.¹, Stern-Mentch N.^{1,2}, Hochner B.¹

1. Neurobiology, Life Sciences, Hebrew University
2. School of Marine Sciences, Ruppit Academic Center

15. Identifying the molecular target and mechanism of action of the Zeta Inhibitory Peptide (ZIP)

Alexey Bingor and Rami Yaka
Pharmacology, School of Pharmacy, Faculty of Medicine, Hebrew University

16. Computerized detection of brain developmental impairments using early neuromotor signs.

Friedman Hagit¹, Frid Alex², Avisrur Shiraz², Vladimirovsky Dmitry², Forkosh Oren³, Gordon Goren³, Schneidman Elad³, Bar-Yosef Omer⁴, Peleg Nimrod², Malah David²

1. Nursing, Faculty of Health Sciences and Social Welfare, University of Haifa
2. Signal and Image Processing Lab, Electrical Engineering Faculty, The Technion
3. Neurobiology, Weizmann Institute of Science
4. Neurology, Safra Children's Hospital, Sheba Medical Center

17. Development of Self-control from Early to Middle Childhood: Genetic and Environmental Contributions to Stability and Change.

Roni Pener-Tessler, Ariel Knafo-Noam
Psychology, The Hebrew University

18. Genes mutated in autism, schizophrenia and intellectual disability are functionally related.

Shahar Shohat, Eyal Ben-David and Sagiv Shifman
Genetics, Life Sciences, Hebrew University

19. Mutation in chromatin related genes in ASD.

Reut Suliman, Shahar shohat, Yonit Maroudas-Sacks, Eyal Ben-David, Sagiv Shifman
Genetics, Life Sciences, Hebrew University



המכון הלאומי לפסיכוביולוגיה בישראל
The National Institute for Psychobiology in Israel

Founded by the Charles E. Smith Family

ההרצאה השנתית לזכר מייסד המכון,
מר צ'רלס סמית

The Annual Lecture in Memory of
Mr. Charles E. Smith
Founder of the Institute

Harnessing hippocampal stem
cells to improve mood
and cognition

Prof. René Hen

Mishkenot Sha'ananim,
Yemin Moshe, Jerusalem
Tuesday, June 2, 2015
Poster Session - 15:00
Lecture - 16:00

Brief bio



Dr. René Hen

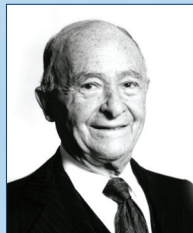
René Hen was born in Strasbourg, France, and received his Ph.D. from University Louis Pasteur under the mentorship of Pierre Chambon. After a postdoctoral stay in Richard Axel's laboratory at Columbia University,

Hen became an assistant professor in Strasbourg. He then returned to Columbia University, where he is presently a professor of pharmacology and neuroscience and the director of the division of integrative neuroscience in the department of psychiatry. His laboratory is using animal models to elucidate the neural substrates that underlie mood and anxiety disorders.

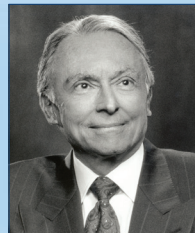
Abstract

Harnessing hippocampal stem cells to improve mood and cognition

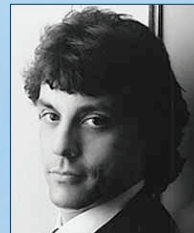
Although a role for adult neurogenesis in specific forms of learning and in mediating some of the effects of antidepressants has received considerable attention in recent years, much less is known about how alterations in this unique form of plasticity may contribute to neurologic or psychiatric disorders. One way to begin to address this question is to link the functions of adult-born hippocampal neurons with specific endophenotypes of these disorders. Recent studies have implicated adult born hippocampal neurons in pattern separation, a process by which similar experiences or events are transformed into discrete non-overlapping representations. Here, we propose that impaired pattern separation underlies the overgeneralization often seen in age-related memory impairments and in anxiety disorders and therefore, represents an endophenotype for these disorders. We will present evidence that strategies aimed at stimulating hippocampal neurogenesis result in improved pattern separation. The development of novel pro-neurogenic compounds may therefore have therapeutic potential for patients who display pattern separation deficits.



Charles E. Smith



Robert H. Smith



David Bruce Smith

The National Institute for Psychobiology in Israel owes its existence to the generosity and foresight of the Smith Family of Washington DC. Over forty years ago, Mr. Charles E. Smith founded the Institute, and his son, Mr. Robert H. Smith deepened and expanded the activities of the Institute. His grandson, Mr. David Bruce Smith continues the family heritage, enabling the Psychobiology Institute to continue its support of basic and applied brain research in Israel.

In 1988 the Smith Family established the Charles E. Smith Family and Prof. Joel Elkes Laboratory for Collaborative Research in Psychobiology. Since its inception, the Institute has been a pivotal force in the development of psychobiology in Israel, supporting a generation of young and established scientists, through research grants, postdoctoral and senior fellowships, visiting lectureships and scientific conferences. In the twenty first century, the Institute continues to identify and promote scientific excellence and to balance and encourage interdisciplinary collaboration between fundamental and clinical research in psychobiology.

Mr. David Bruce Smith serves as President of the Institute, Prof. Elliot Gershon as Chairman of the Board of Trustees, Prof. Ronen Segman, Institute Director, and Prof. Micha Spira, Director of the Smith-Elkes Laboratory.

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Program

15:00 Poster Presentations & Reception

16:00 **Chair: Prof. Ronen Segman**
Director, National Institute for Psychobiology in Israel

Greetings:

Mr. David Bruce Smith

President, National Institute for Psychobiology in Israel

Opening Remarks and Introduction

Prof. Elliot Gershon

Chairman, Board of Trustees, National Institute for Psychobiology in Israel

The Annual Lecture in Memory of Mr. Charles E. Smith

Prof. René Hen

Professor of Pharmacology and Neuroscience
Director, Division of Integrative Neuroscience
in the Department of Psychiatry,
Columbia University, New York

Harnessing hippocampal stem cells to improve mood and cognition