

**International Joint Israel-Greek-Italian Neuroimmunological meeting  
Organised by the Israeli Society (ISNI) under auspice of the Greek Academy  
of Neuroimmunology (HELANA) and the Italian Society (AINI)  
Elounda, Crete, Greece 11-14 June 2015**



**First day 11/6/2015**

19:00 Arrivals, Get together and registration

20:00 **Opening lecture:**

**Michal Schwarz**, (Weizmann Institute, Rehovot, Israel): The immune system and neuroprotection

**Welcome dinner**

**Second day 12/6/2015**

**Session 1 (9:00-11:00): General Neuroimmunology**

**Chairpersons: Alon Monsonego and Joab Chapman**

9:00 **Alon Monsonego**: Neuroimmunology of Alzheimer's disease

9:20 **Dana Eckstein and Sara Eyal**: Inflammatory aspects of epilepsy

9:40 **Avraham Ben Nun**: HLA and Neuroimmunological diseases

10:00 **Joab Chapman**: Neurological complications of systemic autoimmune diseases (APLA, lupus etc)

10:20 Italian lecturer TBA

10:40 **Lesley Probert** : TBA

**11:00-11:30: Coffee break and poster view**

**Session 2 (11:30-13:00):**

**Chairpersons: Leslie Probert and Nathan Karin**

11:30 **Domna Karagogeos** An intimate relationship: axoglial interactions around the node of Ranvier

11:50 **Mia Levitte** Immune (antibody) mediated encephalopathies and epilepsy

12:10 **Ari Waisman** Local self-renewing of microglia is dependent on Interleukin-1 signaling

12:30 **Nathan Karin:** From anti VLA-4 to regulatory T cell based therapies of MS

12:50 **George Kollias** (TBA)

13:10 **Rosetta Pedotti** (Besta Institute, Milan) (TBA)

**13:30-14.15 Lunch break & posters and poster view**

**Session 3: (14:15-16:00): Stem cells in Neuroimmunology: What is their place ? What have we learned in the last decade ?**

**Chairpersons: Antonio Uccelli and Nikolaos Grigoriadis**

**Speakers:**

**Tamir Ben Hur**  
**Neuronal stem cells for neurological diseases**

**Antonio Ucceli**  
**Adult stem cells with focus on mesenchymal stem cells in MS:immunomodulating aspects**

**Dimitrios Karussis and Panayiota Petrou**  
**Unmodified and modified mesenchymal stem cells in ALS and MS: update of the Hadassah clinical trials**

**Nikolaos Grigoriadis**  
**Concerns about the clinical applications of stem cells in neurological diseases**

**Ibrahim Kassis, Moriel Ben-Zwi, Panayiota Petrou, Michelle Halimi and Dimitrios Karussis**  
**Modified Mesenchymal Stem Cells: A novel cellular Therapy Paradigm for the treatment of Multiple Sclerosis**

**Session 4 (16:00-18:00): Selected Abstract presentations**  
**Chairpersons: Domna Karagogeos and Arnon Karni**

**16:00 Revital Aricha, Debby Reuveni, Miriam Souroujon, Sara Fuchs**  
Immunology, Weizmann Institute of Science, Israel; Natural Science, Open University, Israel  
**Autologous Regulatory (Treg) Cells Generated Ex-vivo, Suppress Autoimmune Diseases**

**16:15: M. Kastriti, I. Sargiannidou, K. A. Kleopa and D. Karagogeos.**  
Department of Basic Science, School of Medicine, University of Crete, IMBB-FORTH, Heraklion, Crete, Neuroscience Laboratory, and Neurology Clinics, The Cyprus Institute of Neurology and Genetics, Nicosia, Cyprus  
**Differential Modulation of the Juxtaparanodal Complex in Multiple Sclerosis**

**16:30: Gargano F., Sambucci M., De Bardi M., Gasperini C., Ruggieri S., De Rosa V., Matarese G., Borsellino G. and Battistini L**  
Neuroimmunology Unit, Santa Lucia Foundation, Rome, Italy; Department of Neuroscience "Lancisi", San Camillo Hospital, Rome, Italy; Laboratory of Immunology, Institute of Endocrinology and Experimental Oncology, National Research Council (IEOS-- - CNR), Naples, Italy; Department of Medicine and Surgery, University of Salerno, "Baronissi Campus" Salerno, Italy  
**Foxp3 hi CD45RA/CD39 + Treg cells in Multiple Sclerosis**

**16:45: Parodi B., Mancardi G.L., Centonze D., Kerlero de Rosbo N. and Uccelli;**  
**Rossi S., Morando S., Cordano C., Bragoni A., Motta C., Usai C., Wipke B.T., Scannevin R.H.**  
Neuroimmunology Unit, Department of Neurosciences, Ophthalmology and Genetics, University of Genoa, Genoa, Italy; Department of Neurosciences, Tor Vergata University of Rome, Rome, Italy; National Research Council, Institute of Biophysics, University of Genoa, Genoa, Italy; Biogen Idec, Cambridge Center, MA, USA; Centre of Excellence for Biomedical Research, University of Genoa, Genoa, Italy.  
**Fumarates Modulate Microglia Activation through a Novel HCAR2 Signaling Pathway and Rescue Synaptic Dysregulation in Inflamed CNS**

**17:00: Manuela Bianco, Marco De Bardi, Luca Battistini, Diego Centonze, Elisabetta Volpe, and Claudio Sette.**

Neuroimmunology Unit, Neuroembriology Unit, Santa Lucia Foundation, Rome, Italy; Department of Systems Medicine, University Tor Vergata, Rome, Italy; Neuroembriology Unit, Santa Lucia Foundation, Rome Italy,

**Crucial Role of IL--1 $\beta$   $\beta$ /IL--1R in The Fine--Tune Modulation of Th17 Features in Multiple Sclerosis**

**17:15: Alessandra Consonni, Roberta Marolda, Chiara Cordiglieri, Ilaria Ravanelli, Martina Verolin, Nils Y. Lycke, Renato Mantegazza, Fulvio Baggi**

Neuroimmunology and Neuromuscular Diseases, Neurological Institute "Carlo Besta", Milan, Italy; Toleranzia AB, Gothenburg, Sweden; Department of Microbiology & Immunology, University of Gothenburg, Sweden

**Immunomodulation by a Tolerogenic Recombinant Fusion Protein Containing Acetylcholine Receptor Tcell-epitope 146-162 in Mouse Experimental Myasthenia Gravis.**

**17:30: Daniel Harari, Irit Orr, Ron Rotkopf , Sergio E. Baranzini and Gideon Schreiber.**

Departments of Biological Chemistry and Bioinformatics and Biological Computing Unit, The Weizmann Institute of Science, Rehovot, Israel; Department of Neurology, University of California at San Francisco, San Francisco, USA

**A robust type I Interferon Gene Signature from Blood RNA Defines Quantitative but not Qualitative Differences for Three Major IFN $\beta$  Drugs.**

**20:00-24:00: SOCIAL EVENING and Gala dinner**

### **Third Day: Saturday 13/6/2015**

#### **Session 5 (9:00-12:30): Clinical Neuroimmunology-Multiple Sclerosis Chairpersons: Dimitrios Karussis and Ariel Miller**

9:00: **Invited lecture: Prof. Ludwig Kappos Switzerland:** Overview of modern management of MS

9:45: **Adi Vaknin-Dembinsky:** Updates in NMO spectrum immunopathogenesis

10:05: **Ron Milo:** New mechanisms of the new and old immunomodulators

10:25: **Arnon Karni:** Neuro-regenerative factors and their role in multiple sclerosis

10:45: **Ariel Miller:** Clinical application of Neuroimmunological research

11:05: **Dimitrios Karussis:** Immune reconstitution and induction of long term tolerance: A radical approach for MS

11:30: **Anat Achiron:** The genetic footprints of MS (tentative title)

11:50: **Nikolaos Grigoriadis:** Immunomodulation vs immunosuppression in MS therapy

12:10: **Anna Maria Papini**

From synthetic glycopeptides to the discovery of bacterial proteins cross-reacting with anti-N(Glycosylation) antibodies in Multiple Sclerosis

**12:30-13.30 Lunch break and poster view**

#### **Session 6: Neuroimmunology of the Neuromuscular junction, in the memory of Miriam Souroujon**

**Chairpersons: Sara Fuchs and Talma Brenner**

13:30 **Sara Fuchs:** Few words in memory of Miriam

13:40 **Socrates Tzartos:** New autoantibodies in neuromuscular diseases

14:10 **Talma Brenner** The plasminogen activator system in myasthenia gravis and autoimmunity

14:30 **Fulvio Baggi** Myasthenia Gravis, a paradigmatic antibody-mediated autoimmune disease

14:50 **Aksel Siva, Istanbul, Turkey:** Neuro-Behcet disease

**15:15-15:45: Coffee break and poster view**

**Session 7 (15:45-17:30): Selected Abstract presentations**  
**Chairpersons: Ron Milo and Carlo Avolio**

15:45 **Maria Anagnostouli:** Immunogenetics Of Pediatric Multiple Sclerosis: Towards a Personalized Theurapeutic Approach

16:00: **Ferrara G , Morando S, Errede M, Girolamo F, Ivaldi F, Panini N, Erba E, Perris R, Bendotti C, Mennini T, Garzetti L, Furlan R, Kerlero de Rosbo N, Virgintino D, Uccelli A.**

Department of Neurology, Rehabilitation, Ophthalmology, Genetics, Maternal and Child Health, University of Genoa, Italy; Department of Basic Medical Sciences, Human Anatomy and Histology Unit, University of Bari School of Medicine, Italy; Department of Biochemistry and Molecular Pharmacology, Mario Negri Institute for Pharmacological Research, via La Masa, Milano, Italy; Division for Experimental Oncology, The National Cancer Institute Aviano, CRO-IRCCS, Aviano, Italy; Department of Genetics, Microbiology and Anthropology, University of Parma, Parma, Italy; Institute of Experimental Neurology, Division of Neuroscience, San Raffaele Scientific Institute, Milan, Italy

**NG2, expressed by immune and neural cells, displays multiple roles in development of Experimental Autoimmune Encephalomyelitis**

16:15: **Panayiota Petrou and Dimitrios Karussis**

Department of Neurology, Multiple sclerosis Center and Laboratory of Neuroimmunology; The Agnes-Ginges Center for Neurogenetics, Hadassah University Hospital, Jerusalem, Ein-Kerem, Israel

**THE SPECTRUM OF POST VACCINATION INFLAMMATORY CNS DEMYELINATING SYNDROMS**

16:30: **Emma Portnoy, Boris Polyak, Dorrit Inbar, Gilad Kenan, Ahmad Rai, Suzanne L Wehrli, Timothy P.L. Roberts, Ameer Bishara, Aniv Mann, Miriam Shmuel, Katya Rozovsky, Gal Itzhak, Tamir Ben Hur , Shlomo Magdassi, Dana Ekstein, Sara Eyal.**

Institute for Drug Research, School of Pharmacy, The Hebrew University of Jerusalem, Jerusalem, Israel; Casali Center for Applied Chemistry, Institute of Chemistry and Center for Nanoscience and Nanotechnology, The Hebrew University of Jerusalem, Jerusalem, Israel, Department of Surgery, Drexel University College of Medicine, Philadelphia, Pennsylvania, USA,

Department of Pharmacology and Physiology, Drexel University College of Medicine, Philadelphia, Pennsylvania, USA, Department of Neurology, Agnes Ginges Center for Human Neurogenetics, Hadassah-Hebrew University Medical Center, Jerusalem, Israel, Department of Radiology, Children's Hospital of Philadelphia, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania, USA, Department of Radiology, Hadassah-Hebrew University Medical Center, Jerusalem, Israel.

**Tracking inflammation in the epileptic rat brain by bi-functional nanoparticles**

**16:45 Kati Frid, Ofira Einstein, Yael Friedman-Levi, Orli Binyamin, Tamir Ben Hur and Ruth Gabizon**

Department of Neurology, The Agnes Ginges Center for Human Neurogenetics, Hadassah University Hospital, Jerusalem. Israel

**Prion like aggregation of MBP in chronic demyelination**

**17:00 Ina Leykin , Hanna Charbit, Livnat Brill, Dimitrios Karussis, Iris Iavon, and Adi Vaknin-Dembinsky.**

Department of Neurology, The Agnes Ginges Center for Human Neurogenetics, Hadassah University Hospital, Jerusalem. Israel

**The different quaking protein (QKI) isoforms in inflammatory demyelinating diseases of the central nervous system (CNS).**

**17:15 C. Marini, D. Parodi, C. Scialo, N. Kerlero de Rosbo, A. Uccelli, D. Giundi.**

Departments of Neuroscineces Rorehabilitation, Ophthalmology, Genetics, Maternal and Child health, Genoa, Italy.

**miRNAs shuttled by exosomes derived from immunomodulatory mesenchymal stem cells modulate activation of microglia**

**17:30 Nadav Bleich Kimelman<sup>1</sup>, Shai Rubnov<sup>1</sup>, Uri Danon<sup>1</sup>, Ehud Marom<sup>1</sup>, Ariel Miller<sup>2,3</sup>**

<sup>1</sup>Mapi-Pharma Ltd, Ness Ziona, Israel

<sup>2</sup>Rappaport Faculty of Medicine, Technion- Israel Institute of Technology, Haifa, Israel

<sup>3</sup>Multiple Sclerosis & Brain Research Center, Carmel Medical Center, Haifa, Israel

**Glatiramer Acetate Depot: Towards Clinical Application**

**Fourth Day: Sunday 14/6/2015**

**Session 8 (9:00-10:30): Workshop on Stroke Immunology and cell therapies**

09:00 **From L. Probert Group** (tentative) Immunological mechanisms in acute stroke.

09:20 **T. Karapanagitis** The immunology of acute stroke: from mechanisms to clinical translation

09:40 **G. Tsivgoulis**. Immunological therapies in acute stroke: overview of ongoing clinical trials

10:00: Round table discussion

10:30 **Dimos Mitsikostas** Neuro-inflammatory aspects of migraine

**Session 9 (11:00-12:00): Professional meeting of the Israel society of Neuroimmunology**

**Lunch and afternoon departures**



**POSTERS:**

**Maria Blonda, Roberta Grasso, Antonella Amoruso, Maria Teresa Sollazzo, Valeria Di Francescantonio, Carlo Avolio.**

Dept. of Medical and Surgical Sciences, University of Foggia, Foggia, Italy

**Monocyte Derived Microvesicles In Patients With Multiple Sclerosis. Effects Of Current Immune Treatments for The Disease**

**Zoupi L.1, Savvaki M. 1, Kalemaki A. 1, Kalafatakis I. 1, Karagogeos D. 1**

1Medical School, University of Crete & I.M.B.B.- FoRTH, Heraklion

**Contactin-2/TAG-1 Affects Oligodendrocyte Populations and CNS Myelination**

**Karin Mausner-Fainberga, Hadar Kolba, Yonatan David Feuermann, Arnon Karnia,b\***

aNeuroimmunology Laboratory, Department of Neurology, Tel Aviv Sourasky Medical Center, bSackler's Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel

**Increased Neutralization Capacity of TNF- $\alpha$  in Sera of Patients RR-MS Patients is not Related to Levels of Soluble TNF Receptors or Anti- TNF- $\alpha$  Autoantibodies**

**Ferrara Ga, Morando Sa, Errede Mb, Girolamo Fb, Ivaldi Fa, Panini Nc, Erba Ec, Perris Rd,e, Bendotti Cc, Mennini Tc, Garzetti Lf, Furlan Rf, Kerlero de Rosbo Na, Virgintino Db, Uccelli Aa**

a Department of Neurology, Rehabilitation, Ophthalmology, Genetics, Maternal and Child Health, University of Genoa, L.go P. Daneo, 3, 16132, Genoa, Italy.

bDepartment of Basic Medical Sciences, Human Anatomy and Histology Unit, University of Bari School of Medicine, Piazza Giulio Cesare, 11; 70124, Bari, Italy;

cDepartment of Biochemistry and Molecular Pharmacology, Mario Negri Institute for Pharmacological Research, via La Masa, 19, 20156, Milano, Italy

dDivision for Experimental Oncology 2, The National Cancer Institute Aviano, CRO-IRCCS, Via F. Gallini, 2, 33081, Aviano, Italy

eDepartment of Genetics, Microbiology and Anthropology, University of Parma, Via G.P. Usberti, 11/A; 43100, Parma, Italy.

fInstitute of Experimental Neurology, Division of Neuroscience, San Raffaele Scientific Institute, via Olgettina 60, 20132, Milan, Italy

**Decreased Disease Expression of Experimental Autoimmune Encephalomyelitis in NG2KO Mice Points to a Role for NG2 in Dendritic Cell activation**

**Emanuela Colombo 1 , Marco Di Dario 1 , Giorgia Dina 1 , Evelien Fredrickx 1 , Annamaria Finardi 1 , Livia**

**Garzetti 1 , Daniela Triolo 1 , Roberto Furlan 1 , Carla Taveggia 1 , Angelo Quattrini 1 and Cinthia Farina 1**

Astrocytes Regulate Immune Cell Activation and Demyelination During CNS Neuroinflammation

**Livnat Brill, Dimitrios Karussis, Paul, Friedeman, Ruprecht, Klemens, Panayiota Petrou, and, Adi Vaknin-Dembinsky**

Anti-KIR4.1 antibodies in patients with Neuromyelitis optica (NMO)

**Massimo Costanza a, Marco Di Dario a,b, Lawrence Steinman c, Cinthia Farina a,b, and Rosetta Pedotti a**

a Neuroimmunology and Neuromuscular Disorder Unit, Neurological Institute Foundation IRCCS C. Besta, via Amadeo 42, 20133 Milan, Italy

b Institute of Experimental Neurology (INSpe), San Raffaele Scientific Institute, Via Olgettina 60, 20132 Milan, Italy

c Departments of Pediatrics, Neurology and Neurological Sciences, Stanford University, Stanford, CA, USA

**Gene Expression Analysis of Histamine Receptors in Peripheral Blood Mononuclear Cells from Individuals with Clinically-isolated Syndrome and Different Stages of Multiple Sclerosis**

**Silvia Musio, Massimo Costanza, Gabriella Abolafio\*, Elena Fontana†, Luigi Poliani†, Rosetta Pedotti**

Neuroimmunology and Neuromuscular Disorder Unit, Neurological Institute Foundation IRCCS C. Besta MI; \* Department of Experimental Oncology and Molecular Medicine, Fondazione IRCCS "Istituto Nazionale dei Tumori; † Department of Molecular and Translational medicine, Pathology Unit, University of Brescia, BS

**Treatment with Anti-FcεRI Antibody Increases T Cell Autoimmunity Against Myelin Antigen and Exacerbates Experimental Autoimmune Encephalomyelitis**

**Elena Bonechi<sup>1</sup>, Alessandra Aldinucci<sup>1</sup>, Andrea Galante<sup>1</sup>, Tiziana Biagioli<sup>2</sup>, Anna Maria Repice<sup>3</sup>, Luca Massacesi<sup>1,3</sup>, Clara Ballerini<sup>1</sup>**

<sup>1</sup>NEUROFARBA Department, University of Florence, Italy

<sup>2</sup>Laboratory Department, Careggi University Hospital, Florence Italy

<sup>3</sup>Neurosciences Department, Careggi University Hospital, Florence Italy

**SIGNIFICANT DIFFERENTIAL EXPRESSION OF MMP9 IN CEREBROSPINAL FLUID OF MS AND CIS.**

**Mattei G 1 , Mechelli R 1 , Ricigliano VAG 1 , Buscarinu MC 1 , Annibali V 1 , Frontali M 2 , Ristori G 1 , and Salvetti M 1**

(1) Centre for Experimental Neurological Therapies (CENTERS), Department of Neurosciences, Mental Health and Sensory Organs, Faculty of Medicine and Psychology, Sapienza University of Rome, Italy

(2) Laboratory of Neurogenetics, Institute of Translational Pharmacology, National Research Council of Italy Rome, Italy

**Study on Genetic Variants Associated to Multiple Sclerosis by Exome Sequencing in a High Prevalence Family.**

**Orli Binyamin<sup>1</sup>, Liraz Larush<sup>2</sup>, Kati Frid<sup>1</sup>, Yael Friedman-Levi<sup>1</sup>, Haim Ovdia<sup>1</sup>, Oded Abramsky<sup>1</sup>, Shlomo Magdassi <sup>2</sup> and Ruth Gabizon<sup>1</sup>**

Department of Neurology, The Agnes Ginges Center of Human Neurogenetics, Hadassah University Hospital and Casali Institute of Chemistry, The Hebrew University, Jerusalem, Israel

**Treatment of a Multiple Sclerosis animal model with a novel nanodrop formulation of Pomegranate seed Oil**