

3rd International Conference and Exhibition on **Clinical & Cellular Immunology**

September 29-October 01, 2014 DoubleTree by Hilton Baltimore-BWI Airport, USA

Harnessing the absence (helminthes) to treat the epidemic (autoimmunity)

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The lecture will be based on the recent book *An Epidemic of Absence - A New Way of Understanding Allergies and Autoimmune Disease* by Moises Velasquez-Manoff. It will describe the bilateral interaction between environmental factors and especially viruses, bacteria and helminthes and induction of autoimmune diseases in genetically predisposed subjects. The lecture will also delineate the effects of these infecting agents in presenting autoimmunity along with historical and geoepidemiological facts. 1: The incidence of autoimmune diseases increases the further you are from the equator. 2: Autoimmunity emerged in Sardinia and the USA when the helminthes were eradicated. Multiple sclerosis was the first disease to be treated and ameliorated following supplements of various helminthes. There are several experimental models from colitis to EAE from type 1 diabetes to CIA which were successfully treated by supplementation of helminthes and helminth products. The next stage was the implementation helminth eggs, especially of helminthes whose final host is the pig rather than the human being. It seems that the final step on harnessing the absence to treat the epidemic is synthetic molecules which resemble the active site on the helminth and the eggs which leads to cytokine shift on TH1 to TH2 and induces increase in the number and activity of T-regulatory cells. We will refer to two such molecules based on either similarity or including the phosphorylcholine compound with successful results in collagen induces arthritis, SLE and experimental colitis. These compounds might be a future avenue of ameliorating or even preventing diverse autoimmune diseases.

Biography

Yehuda Shoenfeld is the Founder and Head of the Zabludowicz Center for Autoimmune Diseases, at the Sheba Medical Center which is affiliated to the Sackler Faculty of Medicine in Tel-Aviv University, in Israel. He is the Incumbent of the Laura Schwarz-Kipp Chair for Research of Autoimmune Diseases at the Tel-Aviv University. His clinical and scientific works focus on autoimmune and rheumatic diseases, and he has published more than 1700 papers in journals such as *New Eng J Med*, *Nature*, *Lancet*, *Proc Nat Acad Scie*, *J Clin Invest*, *J Immunol*, *Blood*, *FASEB*, *J Exp Med*, *Circulation*, *Cancer* and others. He has written more than three hundred and fifty chapters in books, and has authored and edited 25 books, some of which became cornerstones in science and clinical practice, all of which were published by Elsevier. He is on the editorial board of 43 journals in the field of rheumatology and autoimmunity and is the founder and the editor of the *IMAJ* (Israel Medical Association Journal) and also is the Founder and Editor of the "Autoimmunity Reviews" (Elsevier). He has organized over 20 international congresses in autoimmunity.

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