



## 2ND INTERDISCIPLINARY SUMMIT ON INFLAMMATION

- A TSIS 2010 Conference -

**March 10th to 13th, 2010**

### **Objective:**

The 2nd International Summit of Inflammation will convene prominent basic and clinical scientists to present a most up-to-date exchange on the current and future perspectives of that complex disease entity.

During the most recent years our understanding predominantly of innate immune response mechanisms and thus in parallel also the insight into the pathology at the cellular and molecular level of chronic and acute inflammatory diseases has been revolutionized. And yet, notwithstanding these developments, we have to accept that still in many facets of inflammatory morbidity major disparities exist, between the novel advances of immunobiologic science and its conversion into clinically relevant progress of patient treatment. We need to pursue new avenues for the assessment, monitoring and treatment of inflammatory diseases.

Thus, the illumination of the numerous unsolved but critically important issues in acute sterile (major tissue injury) and nonsterile (sepsis) inflammation, as well as of chronic inflammatory diseases like autoimmunity induced cell dysfunction, autoinflammation, atherosclerosis, metabolic syndrome, represents the major focus of the Summit of Inflammation/TSIS 2010.

### **Program Structure:**

- A) Molecular Pathogenesis of Acute and Chronic Inflammation
- B) Monitoring of Inflammatory Disease: Biomarkers and Molecular Imaging
- C) Therapeutic Targeting of Inflammatory Disease Entities

*Under the Auspices and in Cooperation with International Association of Inflammation Societies (IAIS)*



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**A I**

**MOLECULAR PATHOGENESIS OF ACUTE AND CHRONIC INFLAMMATION**

**Wednesday, March 10th, 2010**  
**4:00 pm – 7:00 pm**

Moderators: Alan B. Ezekowitz, Rahway, USA  
Luke O'Neill, Dublin, Ireland

**Leukocytes, Inflammation, and Host Defense**  
P. Ward, Ann Arbor, USA

**Regulation of Inflammatory Gene Expression**  
R. Medzhitov, New Haven, USA

**Regulation and Function of NF- $\kappa$ B Signalling Pathways in Inflammation and Immunity**  
M. Karin, San Diego, USA

**Linkage between Innate and Adaptive Immunity**  
L. O'Neill, Dublin, Ireland

**Danger-Associated Molecular Patterns**  
M. Lotze, Pittsburgh, USA

**Sterile vs. Non-Sterile Inflammation: Functional Characteristics**  
K. L. Rock, Worcester, USA

**Cell Death Pathways: Apoptosis, Autophagy and Necrosis**  
D. Green, Memphis, USA



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**A 2**

**ACTIVATION OF INFLAMMATORY PROCESSES: THE ROLE OF THE INFLAMMASOME**

**Thursday, March 11<sup>th</sup>, 2010**  
**8:30 am – 11:30 am**

Moderators:     Gunther Hartmann, Bonn, Germany  
                      Jurg Tschopp, Lausanne, Switzerland

**The Inflammasome: Guardian of Our Body**  
J. Tschopp, Lausanne, Switzerland

**Inhibitors of the Inflammasome**  
M. Netea, Nijmegen, Netherlands

**The Use of Interleukin-1 Antagonists in the Treatment of Diabetes Mellitus**  
M. Donath, Zurich, Switzerland

**NLR Activation by Pathogens**  
G. Nuñez, Ann Arbor, USA

**DNA Sensing by the Inflammasome**  
V. Hornung, Bonn, Germany

**Inflammation through RNA Sensing**  
G. Hartmann, Bonn, Germany



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**A 3**

**CONTROL OF THE IMMUNE RESPONSE**

**Thursday, March 11<sup>th</sup>, 2010**  
**1:00 pm – 4:00 pm**

Moderators: Anne O'Garra, London, United Kingdom  
Ethan M. Shevach, Bethesda, USA

**Zebrafish as a Model for Inflammation**  
M. Dallman, London, United Kingdom

**Control of Immune Responses by Natural and Adaptive Regulatory Cells**  
E. M. Shevach, Bethesda, USA

**IL-10 and Immunoregulation**  
A. O'Garra, London, United Kingdom

**Cytokine Driven Regulation of TH<sub>17</sub> Cells**  
R. A. Kastelein, Palo Alto, USA

**Dichotomy of Treg and TH<sub>17</sub> Generation and Inflammation Control**  
Y. Belkaid, Bethesda, USA

**Severe Innate Immune Response: The Role of Epigenetic Regulation**  
S. Kunkel, Ann Arbor, USA



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**A 4**

**IMMUNOMECHANISMS OF CHRONIC INFLAMMATORY DISEASES**

**Thursday, March 11th, 2010**  
**4:45 pm – 6:45 pm**

Moderators: Diane Mathis, Boston, USA  
Georgio Trinchieri, Frederick, USA

**Adipose Tissue Biology**  
M. Blueher, Leipzig, Germany

**Molecular Mechanisms of Atherosclerosis**  
L. Curtiss, La Jolla, USA

**Metabolic Disease and Inflammation**  
D. Mathis, Boston, USA

**Differential Molecular Disorders of Autoinflammatory Diseases**  
J. W. M. van der Meer, Nijmegen, Netherlands

**Crossroads of Inflammation and Cancer**  
G. Trinchieri, Frederick, USA



**B I**

**MONITORING OF INFLAMMATORY DISEASE: BIOMARKERS**

**Friday, March 12th, 2010**  
**8:30 am – 11:00 am**

Moderators:     Thierry Calandra, Lausanne, Switzerland  
                      Ronald V. Maier, Seattle, USA

**Microarray Technology: Powerful Tool for the Discovery of New Biomarkers**  
W. Xiao, Stanford, USA

**Multi Dimensional Characterization of Trauma Induced Acute Inflammation via Gene Expression Profiling and Proteomic Analysis: The Glue Grant Experience**  
R. V. Maier, Seattle, USA

**Novel Rapid Molecular Tools in Microbiologic Diagnostics**  
T. Calandra, Lausanne, Switzerland

**Diagnostic Assessment of Endotoxin: Evidence for its Presence in Disease and Non-Disease States**  
J. Marshall, Toronto, Canada

**Novel Biomarkers for the Detection and Quantification of Tissue Destruction and Danger**  
E. Faist, Munich, Germany

**Biomarker Panel for Risk Profiling in Metabolic Disease**  
H. Tilg, Hall/Tyrol, Austria



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**B 2**

**MOLECULAR IMAGING IN INFECTION, INFLAMMATION AND BEYOND: STRATEGIES AND APPLICATIONS (PART I)**

**Friday, March 12th, 2010**  
**11:15 am – 1:45 pm**

Moderators: Frank Berger, Munich, Germany  
Ramasamy Paulmurugan, Palo Alto, USA

**Novel Imaging Assay Technologies to Monitor Fundamental Cellular Events in Living Subjects**  
R. Paulmurugan, Palo Alto, USA

**MRI Cell Tracking and Reporter Genes: Principles and Applications**  
J. Bulte, Baltimore, USA

**MR-Based Imaging of Macrophages In Vivo**  
N. Beckmann, Basel, Switzerland

**Imaging Insulinitis and Inflammation in Autoimmune Diabetes**  
A. Moore, Boston, USA

**PET Reporter Gene Imaging in Patients: Reality, Vision or Illusion?**  
S. Yaghoubi, Stanford, USA

**Monitoring of Targeted Therapies in GIST**  
F. Berger, Munich, Germany



**B 3**

**MOLECULAR IMAGING IN INFECTION, INFLAMMATION AND BEYOND:  
STRATEGIES AND APPLICATIONS (PART II)**

**Friday, March 12th, 2010**  
**2:00 pm – 5:00 pm**

Moderators:     Jeff Bulte, Baltimore, USA  
                      Maximilian Reiser, Munich, Germany

**In Vivo Molecular Imaging of Vasculitis and Atherosclerosis**  
T. Saam, Munich, Germany

**Molecular Imaging of Atherosclerosis with Adiponectine-Targeted Nanoconstructs**  
R. Stollberger, Graz, Austria

**Imaging Biomarker for Monitoring Antiangiogenic Drug Effects in Experimental Tumor Models**  
K. Nikolaou, Munich, Germany

**Carbon Nanotube Capsules for Medical Imaging and Therapy**  
L. Wilson, Houston, USA

**Non-Invasive Method of Assessing the Gut Epithelial Barrier: The Time Has Come**  
R. Coimbra, San Diego, USA

**Utilizing Engineered Attenuated Salmonella Typhimurium for Biomedical Imaging: Strategies and Applications**  
J.-J. Min, Chonnam, Korea

**Targeted Transfection by Sonoporation in Inflammatory Bowel Disease**  
J. Rychak, Charlottesville, USA



C I

**THERAPEUTIC TARGETING OF CHRONIC INFLAMMATORY DISEASES**

**Saturday, March 13th, 2010**  
**9:30 am – 12:30 pm**

Moderators: Fionula M. Brennan, London, UK  
Charles A. Dinarello; Denver, USA

**Pattern Recognition Receptors as Therapeutic Targets in the Treatment of Chronic Inflammatory Diseases**

L. O'Neill, Dublin, Ireland

**Interleukin-1 Beta as a Therapeutic Target in Autoinflammatory Diseases**

C. A. Dinarello, Denver, USA

**Cytokine Inhibitors in Autoimmunity: Treatment Rather Than Cure?**

F. M. Brennan, London, UK

**Inhibition of the IL 23/IL 17 Inflammatory Pathways in Human Autoimmune Diseases**

R. De Waal Malefyt, Palo Alto, USA

**Therapeutic Use of Stem Cells in Autoimmune Inflammation: Facts and Perspectives**

J. Van Laar, Newcastle upon Tyne, United Kingdom

**Novel Therapeutic Agents and Targets in Autoimmune Inflammation**

L. Marshall, Springhouse, USA

**Novel Treatment Options for Metabolic Inflammation**

N. Thornberry, Rahway, USA



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**C 2**

**THERAPEUTIC CONCEPTS IN STATES OF ACUTE INFLAMMATION**

**Saturday, March 13th, 2010**  
**1:00 pm – 3:30 pm**

Moderators: Steven M. Opal, Pawtucket, USA  
Kevin J. Tracey, Manhasset, USA

**Toll-Like Receptor Antagonists: Therapeutic Interventions/Clinical Trials in Severe Sepsis/Septic Shock**

D. Rossignol, Woodcliff Lake, USA

**HMGB 1 Therapeutic Target versus Therapeutic Agent**

E. Abraham, Birmingham, USA

**Blood Purification in Patients with Septic Shock: Rationale, Technology and Assessment of Clinical Utility**

S. M. Opal, Pawtucket, USA

**Therapeutic Potential of Ubiquitin: Mechanisms of Action and Preclinical Results**

M. Majetschak, Maywood, USA

**Treatment of Inflammatory Disorders via Vagus Nerve Stimulation**

K. Tracey, Manhasset, USA

**Novel Concepts and Targets for the Use of Vaccines**

A. Cross, Baltimore, USA