

**Cell signalling in the immune system:  
receptors, coreceptors and cytokines  
(from basic to clinic)  
Genoa (Italy), June 19-20, 2000**

**Sala del Maggior Consiglio - Palazzo Ducale  
Piazza Matteotti, 5**

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**Monday, June 19, 2000 - Morning**

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- 08.30      **L. Moretta** (Genoa, I)  
Welcome address and introduction
- Session I**
- Chairmen:    **M.I. Colnaghi** (Milan, I)  
                  **P.H. Krammer** (Heidelberg, D)
- 09.00      **A. Moretta** (Genoa, I)  
The "Natural Cytotoxicity Receptors": the key receptors responsible for NK cell activation in natural cytotoxicity
- 09.35      *Discussant:* **R. Biassoni** (Genoa, I)  
Receptors involved in the regulation of NK cell functions
- 09.50      **A. Santoni** (Rome, I)  
Integrin signalling and regulation of human NK cells functions
- 10.25      **J.V. Ravetch** (New York, USA)  
Fc receptors: activation-inhibition receptor pairing
- 11.00      Coffee break
- 11.20      **P.H. Krammer** (Heidelberg, D)  
Apoptosis: regulation of life and death
- 11.55      **J. Tschopp** (Lausanne, CH)  
FLIP diverts Fas ligand-induced death signals to proliferation
- 12.30      *Discussant:* **R. Testi** (Rome, I)  
Lipid mediators in apoptotic signal transduction
- 12.45      **F. Indiveri** (Genoa, I)  
Immunomodulatory effects of blood transfusions and intravenous immunoglobulin therapy. A role for soluble HLA class 1 and Fas ligand molecules
- 13.20      Lunch

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**Monday, June 19, 2000 - Afternoon**

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**Session II**

- Chairmen:    **J.C. Cerottini** (Lausanne Branch, CH)  
                  **F. Indiveri** (Genoa, I)

- 14.30 *Selected communication:* **A. Puccetti** (Genoa, I)  
Systemic sclerosis autoantibodies bind the HCMV protein UL94 and induce endothelial cell apoptosis
- 14.40 *Selected communication:* **A. Poggi** (Genoa, I)  
Engagement of the Leukocyte-Associated Ig-Like Receptor-1 induces programmed cell death and prevents NF- $\kappa$ B nuclear translocation in human myeloid leukemias
- 14.50 *Selected communication:* **C. Vitale** (Genoa, I)  
Effect of p75/AIRM-1 or CD33 on myeloid cell proliferation and survival
- 15.00 **R.S. Accolla** (Varese/Genoa, I)  
Regulation of MHC gene expression in normal and pathologic conditions
- 15.35 **J. Guardiola** (Naples, I)  
Design of recombinant antigens and TCR repertoire selection
- 16.10 **L. Adorini** (Milan, I)  
The role of IL-12 in autoimmune diabetes
- 16.45 *Discussant:* **U. Dianzani** (Novara, I)  
Deficiency of the Fas apoptosis pathway in the autoimmune diseases
- 17.00 **A. Lanzavecchia** (Bellinzona, CH)  
Regulation of T lymphocyte priming and polarization by dendritic cells
- 17.35 *Selected communication:* **G. Ferlazzo** (Genoa, I)  
Dendritic cells efficiently cross-prime HLA class I restricted cytolytic T lymphocytes when pulsed both autologous and allogeneic necrotic EBV LCL
- 17.45 General discussion

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## Tuesday, June 20, 2000 - Morning

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### Session III

- Chairmen: **G.W. Canonica** (Genoa, I)  
**S. Romagnani** (Florence, I)
- 08.30 **F. Melchers** (Basel, CH)  
Development of the Ig repertoire during B cell development in bone marrow
- 09.05 **F. Caligaris Cappio** (Turin, I)  
The signalling abnormalities in chronic lymphoid malignancies of B cell type
- 09.40 **A. Mantovani** (Brescia/Milan, I)  
Tuning and shaping of the chemokine system
- 10.15 Coffee break
- 10.35 *Selected communication:* **B. Azzarone** (Villejuif, F)  
Th2 cytokines induce the  $\gamma$ c chain and an unusual signal transduction in human lung fibroblasts
- 10.45 *Selected communication:* **S. Ferrini** (Genoa, I)  
IL-18 and caspase-1 mRNA and proteins are frequently expressed by human ovarian cancer
- 10.55 **S. Romagnani** (Florence, I)  
Role of chemokines and in the development of human T cells and T-cell effector

- functions
- 11.30 **J.-C. Cerottini** (Lausanne Branch, CH)  
Direct evaluation of human CTL responses to melanoma antigens
- 12.05 **L.D. Notarangelo** (Brescia, I)  
Combined immune deficiencies due to defects in cytokine-mediated signal transduction
- 12.40 **L. Moretta** (Genova, I)  
Concluding remarks

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## Tuesday, June 20, 2000 - Afternoon

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### Workshop on Molecular Biology Techniques for Clinical Diagnosis

Laboratorio di Immunopatologia,  
Centro di Biotecnologie Avanzate  
Largo Rosanna Benzi, 10 - I-16132 GENOA (Italy)

- 14.30-15.30 Molecular diagnostic techniques in immunology (C. Bottino, R. Biassoni)
- 15.30-16.00 Break
- 16.00-17.30 Practical demonstration on:  
SDS-PAGE/western blot  
RT - PCR  
Transient transfections  
ELISA test
- 17.30-18.00 Discussion

#### Teachers:

Cristina Bottino  
Claudia Cantoni  
Roberto Biassoni  
Raffaella Augugliaro

The workshop will be held at the above mentioned research laboratories (Laboratorio di Immunopatologia, Centro di Biotecnologie Avanzate, Largo Rosanna Benzi, 10 - I-16132 GENOA, Italy - Tel. +39 010 5737219; Fax +39 010 354123). The course is designed to review basic molecular diagnostic techniques in the field of immunology diseases. Participants should be biologists, medical students or fellows who show a specific interest for this field.

#### Participants:

The workshop is open to 15 participants who provided a short curriculum and showed an interest in the specific field of molecular diagnosis.

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*The past several years have witnessed major progresses in our understanding of how cells of the immune system communicate each other or with other cell types responsible for different effector functions. In the early '90 a frequent claim was that most lymphocyte surface molecules and receptors had already been discovered and that no major increments should be expected to the*

already large number of cytokines. These ideas have been overcome by the discovery of a large number of novel cell surface molecules functioning as receptors or coreceptors mediating important effector or regulatory functions. For example, the molecular mechanisms by which Natural Killer cell function has been largely unraveled by the discovery of MHC-class I-specific inhibitory receptors and by the recent identification of the natural cytotoxicity receptors (NCR), responsible for the NK cell triggering in the process of target cell lysis. The number and the complexity of cytokines and especially of chemokines and their receptors have increased almost exponentially during the past several years. Thus, over 50 chemokines and at least 15 chemokine-receptors have been identified the production/expression of which finely regulates the migration and homing of leukocytes during their maturation or their involvement in different effector mechanisms. Moreover, a number of novel cell signalling pathways could be identified mediating cell triggering, inhibition or programmed cell death. Thus, a new world of intracellular kinases, phosphatases, caspases, negative regulatory proteins and transcription factors have been discovered. In addition, the precise role of already known molecules could be identified thanks to novel information from knockout mice or patients with specific mutations. All of these acquisitions at the molecular level perfectly fit with classical studies of cellular or applied immunology, allowing a more precise understanding of the heterogeneity and complexity of cellular interactions and cell to cell signalling.

The meeting entitled "Cell signalling in the immune system: receptors, coreceptors and cytokines (from basic to clinic)" to be held in Genoa on June 19th-20th will gather together a group of highly selected and internationally recognized scientists to provide a state of the art of different aspects of cell signalling in the immune system. A major effort will be made to discuss recent advances in the context of possible applications to clinic. A practical/educational part will take place in a highly qualified laboratory. (The number of participants will be limited to 15). This will allow a direct appreciation of methods of molecular biology which allow a molecular diagnosis in medicine. The meeting is particularly suited for medical or Ph.D. doctors or students.

Prof. Lorenzo Moretta  
President of the Meeting

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### **Organized by**

Fondazione Internazionale Menarini

### **Under the Auspices of**

Facoltà di Medicina e Chirurgia dell'Università degli Studi di Genova  
Società Italiana di Immunologia  
Società Italiana di Immunologia ed Immunologia Clinica  
Istituto Nazionale per la Ricerca sul Cancro, Genova

### **President of the Meeting**

Lorenzo Moretta  
Dipartimento di Medicina Sperimentale, Università di Genova  
and Istituto Nazionale per la Ricerca sul Cancro, Genova

### **Honorary Committee**

Sandro Pontremoli, Rettore Università degli Studi di Genova  
Umberto M. Marinari, Preside Facoltà di Medicina e Chirurgia, Università degli Studi di Genova  
Giorgio Nanni, Direttore Dipartimento di Medicina Sperimentale, Università degli Studi di Genova  
Leonardo Santi, Direttore Scientifico Istituto Nazionale per la Ricerca sul Cancro, Genova  
Alberto Bertolini, Direttore Scientifico Istituto Giannina Gaslini, Genova

### **Scientific Committee of the Meeting**

G. Walter Canonica, Francesco Indiveri, M. Cristina Mingari and Alessandro Moretta

**Scientific Secretariat**

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