Tumor Necrosis Factor: Structure, Mechanism of Action, Role in Disease and Therapy

2nd International Conference on Tumor Necrosis Factor and Related Cytokines, Napa, Calif., January 15-20, 1989

Tumor Necrosis Factor: Structure, Mechanism of Action, Role in Disease and Therapy

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Contents

Acknowledgments VIII
Preface IX

Keynote Address
Old L.J. (New York, N.Y.): Tumor Necrosis Factor 1

Molecular Structure, Gene Organization and Induction
Structure of TNF at 2.9 A Resolution 31
Tomita, K.; Shirai, H.; Hakoshima, T. (Suita/Osaka): X-Ray Structural Studies of
Tumor Necrosis Factor 38
Ruddle, N.H.; Paul, N.L.; Fashena, S.J.; McGrath, K.M. (New Haven, Conn.):
Molecular Regulation of Lymphotoxin Gene Expression 43
Aggarwal, B.B. (South San Francisco, Calif.): Differences in the Biological Responses
and the Structure of Lymphotoxin and Tumor Necrosis Factor 49

Molecular Mechanism of Action
Kobrich, G.; Pfizenmaier, K.; Scheurich, P. (Gottingen): Control of TNF Receptor
Expression and Function by Protein Kinases 55
Inhibitor Type-2 Is Induced by Tumor Necrosis Factor and Protein Kinase C
Activity Is Required for Its Induction 60
Granger, G.A.; Knaur, M.F.; Fitzgerald, T.P. (Irvine, Calif.); Yamamoto, R.S.
(Long Beach, Calif.); Longmuir, K.J. (Irvine, Calif.): Phospholipase Activation
in Murine L929 Cells during in vitro Destruction Induced by Recombinant
Human TNF and Lymphotoxin 67
Yoshimura, T.; Sone, S.; Ogura, T. (Tokushima): Membrane Perturbation as a
Possible Cytotoxic Mechanism of TNF and Interferons 70
Contents VI

Rice, G.C.; Kramer, S.M.; Figari, I.S.; Ranges, G.E.; Palladino, M.A. (South San Francisco, Calif.): Tumor Necrosis Factor-Alpha: A Species-Specific Cytokine? 87

Workshop Summaries
Rubin, B.Y. (New York, N.Y.); Ware, C.F. (Riverside, Calif.): Binding, Receptor Characterization and Expression, and Intracellular Events 94
Vassalli, P. (Geneva); Mantovani, G. (Cagliari): Synergistic Effects, Cytokine Cascades and Interactions 97
Klostergaard, J. (Houston, Tex.); Sheehan, K.C.F. (St. Louis, Mo.): Role in Lymphocyte and Macrophage-Mediated Cell Lysis: Other Cytotoxic Lymphokines and Monokine 100
Jacobsen, H. (Heidelberg); Morikawa, M. (Tokyo): Effects of TNF on Mammalian Cells: Differentiation, Proliferation and Cytotoxicity 103

Pleiotropic Biologic Effects in vitro: Differentiation and Regulation
Epstein L.B.; Lackides, G.A.; Smith, D.M. (San Francisco, Calif.): The Complex Relationship of Tumor Necrosis Factor and Interleukin-1 p in Human Monocytes 107
Cassatella, M.A.; Perussia, B.; Trinchieri, G. (Philadelphia, Pa.): Tumor Necrosis Factor Is a Differentiation-Inducing Factor for Hematopoietic Cells 114
Lipsky, P.E. (Dallas, Tex.): Enhancement of Human T and B Cell Function by Tumor Necrosis Factor-Alpha 120
Bonavida, B.; Tsuchchitani, T.; Safrit, J.; Zighelboim, J. (Los Angeles, Calif.): Hierarchy of Tumor Cell Sensitivity and Resistance to Cytolysis by TNF, Cytotoxic Cells, Bacterial Toxins, and Cytotoxic Drugs 125

Pleiotropic Biologic Effects in vitro: Interaction with Other Cytokines
Vilcek, J. (New York, N.Y.); Interleukin-6: A Cytokine Induced by TNF, and Once Thought to Mediate the Antiviral Action of TNF, Inhibits TNF Production in Monocytes and in U937 Cells Primed with GM-CSF 133
Matsushima, K.; Larsen, C.F.; Samanta, A.K.; Mukaida, N.; Anderson, A.O.; Oppenheim, J.J. (Frederick, Md.): An Interleukin-1/Tumor Necrosis Factor Inducible Inflammatory Cytokine, Interleukin-8 140

Contents VII

Wallach, D.; Aderka, C; Rubinstein, M.; Engelmann, H. (Rehovot); Avni, Y.S.; Sarov, I. (Beer Sheva); Holtmann, H. (Hannover): Mechanisms Involved in Regulation of the Response to Tumor Necrosis Factor. Possible Roles for Prostaglandin Production in Sensitization to TNF Effects and for a Specific TNF-Binding Protein in Protection from Them 146

Pleiotropic Effects in vivo: Infectious Diseases
Clark, I.A.; Cowden, W.B.; Chaudhri, G. (Canberra): The Pleiotropic Effects of Tumor Necrosis Factor in Malaria 156
Waage, A. (Trondheim); Halstensen, A. (Bergen); Brandtzaeg, P. (Oslo); Shalaby, R.; Espevik, T. (Trondheim): Tumor Necrosis Factor, Interleukin-1, and Interleukin-6 in Meningococcal Disease 162
Nelson, R.D.; Fast, D.J.; Schlievert, P.M. (Minneapolis, Minn.): Pyrogenic Toxin Stimulation of TNF Production by Human Mononuclear Leukocytes and Effect of TNF on Neutrophil Chemotaxis 177
Galanos, C; Freudenberg, M.A. (Freiburg): Tumor Necrosis Factor Mediates Endotoxin Shock: The Protective Effects of Antibodies and Cortisone 187
Rothstein J.L.; Schreiber, H. (Chicago, 111.): Tumor Necrosis Factor and Complement: Induction of Hemorrhagic Necrosis in Normal Tissue 194

Pleiotropic Effects in vivo: Therapy and Pathogenesis
Haranaka, K.; Satomi, N.; Sakurai, A.; limura, F.; Haranaka, R. (Tokyo): Influence of TNF and/or LPS on the Arachidonic Cascade 203
Taguchi, T. (Suita/Osaka): Clinical Trial of Tumor Necrosis Factor in Japan 213
Jacob, CO.; Aiso, S.; Michie, S.A.; McDevitt, H.O.; Acha-Orbea, H. (Stanford, Calif.): Inhibition of Adoptive Transfer and Development of Spontaneous Diabetes mellitus in Nonobese Diabetic Mice by TNF- 222
Workshop Summaries
Soma, G.-I. (Kanagawa); Balkwill, F. (London): Further Improvement of Clinical Application of TNF and Antitumor Therapeutics 240
Freudenberg, M.A. (Freiburg); Gooding, L. (Atlanta, Ga.); Saton, M. (Kanagawa): Wasting, Endotoxin Shock, Vascular Effects, Inflammation, Infectious Diseases and Prevention of Side Effects 242
Jacob, CO. (Stanford, Calif.): TNF in Autoimmunity 244

Subject Index 247

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Preface

The contents of this volume represent the efforts of leading scientists from many countries. They are the summation of results presented at the Second International Congress on Tumor Necrosis Factor and Related Cytokines. The volume contains the research progress of the last 3 years following the first International Congress held in Heidelberg, FRG in 1987. We believe you, the reader, will agree that a great deal of new information has been obtained in this short period of time. The understanding that we were dealing with cytokines in this area really began from two different directions
in the late 1960s and early 1970s. In vivo when serum factors were shown to cause tumor necrosis and a wasting disease in animals. In vitro with the discovery that stimulated lymphocytes and macrophages could release proteins which killed cells in vitro. It became clear upon purification, sequencing and expression of the cytokines responsible for these phenomena that they are due to the same cytokines.

The early work was done BC, that is, before cloning and much of the ground work which permitted present studies was conducted during that period. Yet, investigators in the BC period had very narrow views of what effects these cytokines caused both in vivo and in vitro.

Studies from many laboratories employing recombination molecules, now reveal that these cytokines have a multitude of effects on cells and tissue both in vitro and in vivo. This was a central theme of the first International Congress. The data contained in this volume further expands the cell and tissue effects elicited by these cytokines; however, recent studies reveal some of the basic mechanisms involved in how these cytokines cause their effects. The meeting and the volume are organized from molecular to cell tissue levels. In addition to original research papers presented and summarized here, there were several other papers presented and discussed in workshop sessions and the summary of these workshops has been included in the book.

The congress organizing committee of the meeting and the editors of this volume wish to share these results with you and hope you will find them as exciting as we do.

The Cancer Research Institute (CRI), who sponsored this symposium, was founded as a non-profit intermediary organization to foster the field of cancer immunology. Since 1953, the CRI has provided support to scientists working to solve all aspects of the cancer/immune system puzzle. We have our roots in the pioneering efforts of Dr. William B. Coley, a New York physician who had success in treating cancer patients with a killed-bacteria vaccine in the late 19th century. His daughter, Helen Coley Nauts, compiled his records and founded the CRI to build upon her father's valuable legacy. Dr. Coley’s work formed the basis for many subsequent discoveries, including the identification of tumor necrosis factors by Dr. Lloyd J. Old, Scientific Director of the CRI, and his colleagues. In 1984, the CRI sponsored a workshop entitled 'Lymphotoxin, Tumor Necrosis Factor, and T, NK, and Macrophage Cytotoxic Factors'. It also helped sponsor the first International Conference on Tumor Necrosis Factor and Related Cytokines. The sponsorship of the second meeting in this series carries on the tradition of supporting the investigation of the interaction between bacterial products and the
immune system.
The editors of the volume wish to thank the diligent participation of the organizing committee (Drs. Cerami, Gifford, Haranaka, Kalden, Kirchner, Maennel, Matthews, Old and Wallach), who have contributed time and effort to make this meeting successful. Also, the assistance of the UCLA Symposia staff and particularly Dr. Robin W. Yeaton Woo is greatly appreciated.

G. Granger
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