

PREFACE

The relationship of vitamin intake to the functioning of the immune system has been emphasized in recent times. A prime example is the linkage between vitamin D deficiency and the genesis of colon cancer. It is now known that there are many such linkages between vitamin deficiencies and various disease conditions. Much of these phenomena can be related to the effects of vitamins on the functionality of the immune system, the system by which beginning cancers are removed. In this volume is reviewed the recent knowledge of these relationships involving vitamin D, vitamin A, vitamin E, vitamin C, and even L-carnitine which, itself, is not classified as a vitamin but has interesting effects on immunity and inflammation.

I have tried to arrange the contributions so that more general discussions appear at first and more specific discussions about individual disease conditions are presented afterward. Accordingly, the first chapter is entitled "Vitamin D Regulation of Immune Function" by D. D. Bikle. This is followed by "Vitamin D and Innate and Adaptive Immunity" by M. Hewison. This is followed by "Dendritic Cells Modified by Vitamin D: Future Immunotherapy for Autoimmune Diseases" by A. W. Pedersen, M. H. Claesson, and M.-B. Zocca. C. H. Kim reviews "Retinoic Acid, Immunity, and Inflammation." A. C. Ross, Q. Chen, and Y. Ma follow with "Vitamin A and Retinoic Acid in the Regulation of B Cell Development and Antibody Production." Retinoic acid is also the topic of M. Iwata and A. Yokota who introduce "Retinoic Acid Production by Intestinal Dendritic Cells." N. Engedal reviews "Immune Regulator Vitamin A and T Cell Death." Vitamin E comes into the picture with "Vitamin E and Immunity" by D. Pekmezci, and this completes the general topics.

Relating to more specific diseases, S. Hansdottir and M. M. Monick offer "Vitamin D Effects on Lung Immunity and Respiratory Diseases." "Maternal Vitamin D During Pregnancy and Its Relation to Immune-Mediated Diseases in the Offspring" is the subject of E. Majaliisa, N. Bright I, and H. T. Viljakainen. "Vitamin D Deficiency and Connective Tissue Disease" is by E. Zold, Z. Barta, and E. Bodolay. L. Alpsoy and M. E. Yalvac introduce "Key Roles of Vitamin A, C, and E in Aflatoxin B₁-Induced Oxidative Stress." "Vitamin D, Vitamin D Receptor, and Cathelicidin in the Treatment of Tuberculosis" is the contribution of P. Selvaraj. M. Cutolo, M. Plebani, Y. Shoenfeld, L. Adorini, and A. Tincani write about "Vitamin D Endocrine System and the Immune Response in Rheumatic Diseases." G. Fortin introduces "L-Carnitine and Intestinal

Inflammation." Bowel disease is discussed by S. Ardizzone, A. Cassinotti, M. Bevilacqua, M. Clerici, and G. B. Porro. W. Janssens, C. Mathieu, S. Boonen, and M. Decramer describe "Vitamin D Deficiency and Chronic Obstructive Pulmonary Disease: A Vicious Circle." J. Smolders and J. Damoiseaux introduce "Vitamin D as a T Cell Modulator in Multiple Sclerosis." Finally, U. Thiem and K. Borchhardt detail "Vitamin D in Solid Organ Transplantation with Special Emphasis on Kidney Transplantation."

Key roles in the final processing of this volume have been played by Delsy Retchagar with oversight by Lisa Tickner and lately by Mary Ann Zimmerman and others at Elsevier.

The cover figure is reproduced from Figure 2.2 from the contribution entitled "Vitamin D and innate and adaptive immunity" by Martin Hewison.

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