Preface

The cytokines are generally considered to be a group of peptides secreted by cells of the immune system such as macrophages, lymphocytes and T cells, although the same peptides may also be secreted by non-immune cells such as neurological tissues and adipocytes. The term *cytokine* is, however, simplistic and in fact they are divided into functional families such as the interferons and colony-stimulating factors. In normative situations they act to control the immune milieu but in some circumstances they can be harmful. That is, they can be anti- and pro-inflammatory. They can be "good" and "bad". However, the actions of the cytokines are not confined to the immune or inflammatory response. They can respond to metabolic dysregulation such as oxidative stress and even alter in psychiatric conditions. In other words they have a diverse range of responses in numerous pathophysiological and lifestyle conditions. It is conceivable that pathways and points of therapeutic intervention in one tissue may be applicable to other tissues or conditions. In *Cytokines* the Editor has invited distinguished scholars to write chapters which together will provide readers with a holistic knowledge-base to enable them to understand cytokines in specific or broad details. There are six sections as follows:

(1) General and cellular aspects
(2) Lifestyle factors and life events
(3) Immunology and infections
(4) Cancer
(5) Cardiovascular and metabolic disease
(6) Organs and tissue systems

The book has a mixture of preclinical and clinical information and includes chapters on microRNAs, tight junctions, cytokine networks and MAPKs, natural killer cells, T helper subsets, viral infection, pulmonary tuberculosis, HIV, exercise, tissue repair, alcoholism, the elderly, lung cancer, breast cancer, cancer immunotherapy, chemotherapeutic drugs, cardiovascular risk, angiogenic cytokine therapy, diabetes, hypo- and hyperglycemia, metabolic syndrome, skeletal muscle insulin resistance, Alzheimer's disease, Parkinson's disease, cerebrospinal fluid cytokines, encephalitis, bone and rheumatoid arthritis. The book is designed for a broad scientific readership including health scientists, doctors, physiologists,

immunologists, biochemists, college and university teachers and lecturers, undergraduates and graduates. The chapters are written either by national or international experts or specialists in their field.

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