

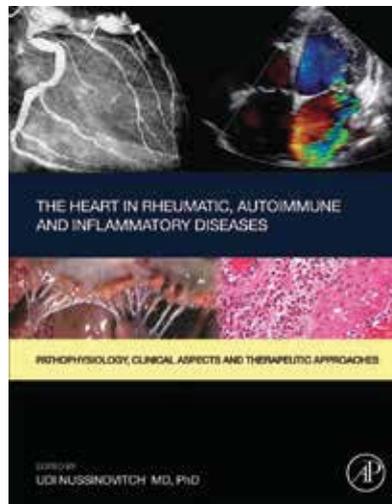
# The Heart in Rheumatic, Autoimmune and Inflammatory Diseases: *Pathophysiology, Clinical Aspects and Therapeutic Approaches*, 1st edition

Edited by Udi Nussinovitch MD PhD, published by the Elsevier Publishing Group, Academic Press, 2017, 766 pages (Hardcover ISBN: 9780128032671, eBook ISBN: 9780128032688)

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Rheumatic and immune-mediated diseases are quite prevalent today, affecting approximately 10% of the general population. Unfortunately, with the ever growing number of patients with these diseases, complications develop. These complications include accelerated atherosclerosis, ischemic heart disease, heart failure and life-threatening arrhythmias [1,2]. Despite major advances in patient care, cardiovascular problems are often underdiagnosed and remain a leading cause of morbidity and early death. Importantly, autoimmune rheumatic diseases can affect the coronary vessels, myocardium, pericardium, and heart valves as well as the conduction system [1-3]. Both tachyarrhythmias and bradyarrhythmias have been reported in patients with immune-mediated diseases and are sometimes associated with devastating consequences. Cardiovascular manifestations are far more common than would be expected and not just due to the higher prevalence of traditional cardiovascular risk factors found in some patients. Interestingly, several autoantigens are shared by heart tissues and joints, which may further contribute to the pathogenesis. Other contributory mechanisms include the association between the chronic systemic inflammatory burden and endothelial dysfunction as well as an occasional increased tendency for thrombophilia. Recognizing these unique cardiovascular risk factors and complications requires familiarization with the available medical knowledge and a high degree of suspicion [1-6].

Nussinovitch [7] furthers the understanding of these important medical issues among clinicians. Specifically, *The Heart in*



*Rheumatic, Autoimmune and Inflammatory Diseases* is a useful resource for medical libraries as well as for health professionals who provide care for patients with immune-mediated and systemic inflammatory diseases (i.e., rheumatologists, immunologists, internal medicine specialists, general practitioners, and primary caregivers). In addition, this volume is an essential reference for cardiologists to expand their knowledge in cardio-immunology.

In recent years, we have witnessed a revolution in many medical fields, which has translated into better patient care. New treatments and technologies in the fields of cardiology and immunology have become available, innovative diagnostic modalities have been developed and optimized, guidelines have been dramatically altered, and clinical approaches have been extensively modified. While diagnostic studies, medical interventions, and screening tests have become more complex, our understanding

of the pathophysiological processes has significantly improved. Despite the need for a new broad review in the form of a medical textbook, more than a dozen years have elapsed since the last attempt to systematically address the aforementioned topic in a scientific manuscript [8].

In addition to Nussinovitch, many distinguished research scientists also contributed to this textbook, which endeavors to fill that gap and provide an extensive and broad review of the current medical knowledge in the field of cardio-immunology. Overall, more than 150 leading researchers from 31 countries collaborated to create this wide-ranging textbook. These authors have provided readers with valuable perspectives and expertise. Most of the contributors are recognizable to rheumatologists and cardiologists and all are renowned for their major contributions to medicine. Numerous papers have been published on these topics and the considerable information that is available tends to be complex and technical. Therefore, major efforts were invested in crafting this book to make it easy to understand and accessible to different audiences, while retaining excellent scientific qualities.

The book is subdivided into three major sections. The first section discusses pathological mechanisms underlying cardiac involvement in systemic and autoimmune diseases. These mechanisms contribute to the pathogenesis of accelerated atherosclerosis and inflammation of the cardiac tissues. It also focuses on screening tests used to identify cardiovascular involvement in patients with systemic diseases. This information is important to clinics

and hospitals that aspire to develop these abilities and services. This book will also help clinicians to become familiar with the numerous available diagnostic tests and improve their interpretive abilities.

The second section of the book focuses on specific diseases and their heart-associated complications, while the third section discusses therapies. The chapters are devoted to all major inflammatory, systemic, immune-mediated, and autoinflammatory conditions, as well as vasculitides.

Both desirable and adverse drug-associated cardiovascular outcomes are reviewed in depth in the textbook. The book is supported by evidence-based medicine and provides readers with a high level of excellence on many different topics.

Of note, the textbook is supplemented with a unique collection of colorful images, including histological studies and photographs of pathologic specimens. It also includes documentation of many different abnormal findings that may be detected using advanced cardiac imaging modalities. These figures as well as the many detailed tables provide readers with important insights and abundance of clinically important data.

Nussinovitch, the sole editor of this new textbook, has been recognized for his medical research [9-15]. He has published groundbreaking papers in journals such as *Nature* and has focusing mostly on novel cardiovascular therapeutic approaches. During most of his career, his research studies have been directed toward cardio-

vascular manifestations of rheumatic and autoinflammatory conditions. Notably, he was recently included in *The Marker's* prestigious list of leading young scientists.

In conclusion, it is my sincere belief that the readers of this textbook will be fully satisfied and appreciate this work. This book will be a valuable reference for rheumatologists and cardiologists. In addition, immunologists, internists, and general practitioners will find it interesting and useful.

I fully recommend *The Heart in Rheumatic, Autoimmune and Inflammatory Diseases* to clinicians and researchers who aspire to deepen their understanding of these important clinical topics and improve patient care.

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### Capsule

#### Protectin and resolvin gut inflammation

Even when laced with syrup, cod liver oil is disgusting, but it is an important source of omega-3 docosapentaenoic fatty acid (DPA). After being swallowed, DPA is converted into specialized pro-resolving lipid mediators (SPMs), including protectin and resolvin. SPMs are naturally produced by leukocytes and are essential for repairing the damage caused to tissues by inflammation, such as during inflammatory bowel disease (IBD). Gobbetti et al. found that mice with induced IBD have up-regulated protectin and resolvin

pathways. If mice were treated with SPMs, their colons lengthened and ulceration was reduced (independently of the anti-inflammatory cytokine interleukin-10). Protectin and resolvin appear to almost lubricate neutrophils by preventing them from sticking to the lining of blood vessels and escaping to invade the colon. The next step is to find out what causes normal inflammatory repair to fail during IBD.

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