**Twelve Diseases That Changed Our World**

Irwin W. Sherman  
ASM Press, Washington, DC, USA, 2007  
ISBN-10: 978-1555814662  
Pages: 219; Price: US $29.95

Twelve Diseases That Changed Our World offers engaging observations on a dozen diseases to serve two goals. The opening chapters meet the title’s promise by tracing the impact of hereditary blood disorders porphyria and hemophilia on the succession of European monarchs in the 16th through 18th centuries. Also presented is a riveting account of the consequences of a potato blight in 1840s Ireland, which forced migration of millions to England and North America. Thereafter, the book turns to the topic of infectious diseases and the lessons learned from earlier responses to “unanticipated outbreaks of disease” to inform preparedness for future outbreaks.

**John W. Ward*  
*Centers for Disease Control and Prevention, Atlanta, Georgia, USA**

Address for correspondence: John W. Ward, Centers for Disease Control and Prevention, Division of Viral Hepatitis, 1600 Clifton Rd NE, Mailstop G37, Atlanta, GA 30333, USA; email: jww4@cdc.gov

---

**Superantigens: Molecular Basis for Their Role in Human Diseases**

Malak Kotb and John D. Fraser, editors  
ASM Press, Washington, DC, USA, 2007  
ISBN-10: 1555814247  
Pages: 263; Price: US $129.95

This collection of short reviews by experts in the field provides an extensive overview of microbial superantigens, an unusual family of proteins that form an abnormal linkage between the major histocompatibility complex class II antigens and specific T-cell repertoire Vβ families. This linkage leads to the nonspecific activation of large numbers of regulatory T lymphocytes, producing cytokine storms that can have a variety of serious clinical consequences.

The book is organized into 5 sections with a total of 16 chapters. The first section is an overview of the breadth and scope of superantigen research, including an up-to-date catalog of superantigens characterized from both bacteria and viruses, their cellular interactions, and disease associations. The next 3 chapters deal with the 3-dimensional structure, function, and diversity of superantigens, including an account of the critical involvement of zinc in the optimal binding of some of these proteins. Section 3 contains an entire chapter that describes the pathophysiology of superantigens in both acute and chronic skin disorders. Several chapters in section 4 describe in vitro and animal model systems for the study of diseases caused by superantigens, including autoimmune disease, neuropathology, toxic shock, and others.

The final 4 chapters in section 5 detail various therapeutic approaches for superantigen-mediated diseases. These approaches include conventional antibiotics, antagonistic peptides, intravenous immunoglobulin, antibodies directed to T-cell costimulatory receptors, and superantigen receptor mimics, in addition to existing and experimental approaches. An unnumbered section after the first chapter contains high-quality color plate illustrations, which collectively provide outstanding visual support for several chapters.

Superantigens affords a comprehensive look at the current state of knowledge regarding these interesting proteins in a relatively compact volume. The text is certainly a must-read for any scientist engaged in their study but will also prove a rewarding read for microbiologists interested in this curious interaction between miembros and the immune system.