



Book Reviews

Molecular Biology of Diabetes Vol I Autoimmunity and Genetics; Insulin Synthesis and Secretion

Edited by Boris Draznin and Derek Le Roith. Published by Humana Press, Totowa, New Jersey.

This is an edited book divided into two sections. The first section is titled Molecular Mechanisms of Autoimmunity and Genetics of Diabetes and contains four chapters. The second section, titled Molecular Cellular Aspects of Insulin Synthesis and Secretion contains 12 chapters. The book provides a comprehensive and current update on the status of investigations and knowledge relating to these two fields of study of the molecular biology of diabetes and insulin synthesis. Even though the book contains a large number of contributors, the flow of information is very good and concise. It is refreshing that most chapters contain only a limited number of reproductions of previously published data and rely more on providing new and relevant concepts and future directions relating to the topic of the chapter.

Several chapters from each section deserve special mention. The first chapter by Pietropaolo and Eisenbarth provides an excellent overview of autoimmunity and Type I Diabetes. It describes the current knowledge of possible antigens as target molecules of

IDDM and the section on the pathogenic hypothesis of IDDM is well written. The fourth chapter of Section I by Calcinaro, Wegmann and Lafferty also provides a good description of the pathogenesis of IDDM and the possibilities of future therapy.

Chapter 6 in the second section by Newgard, Ferber, Quaade, Johnson, and Hughes presents comprehensive information on the role of glucose transport in the regulation of insulin secretion. The section of this chapter discussing the possibility of future therapeutic advances using genetically engineered cell lines that mimic normal islets to replace damaged B cells is particularly interesting. The chapter on B cells receptors by Dillon, Lu, Wheeler, and Boyd describes signal transduction mechanisms of glucose stimulated insulin secretion. The diagrams provided in this chapter are particularly useful.

Because of the complexity of the subject matter this is not a book for undergraduates but would be a valuable addition to the personal library of the basic scientist interested in the study of molecular biology and/or diabetes. The book would also serve as a useful reference to demonstrate the adaption of basic research to the clinical field.

Mark Yorek