
Contents

<i>Preface</i>	<i>v</i>
<i>Contributors</i>	<i>ix</i>
Type 1 Diabetes: Current Perspectives	1
<i>Aizhan Kozhakhmetova and Kathleen M. Gillespie</i>	
PART I GENES	
Type 1 Diabetes High-Risk HLA Class II Determination by Polymerase Chain Reaction Sequence-Specific Primers	13
<i>Rachel J. Aitken, Georgina L. Mortimer, and Kathleen M. Gillespie</i>	
Pancreatic Beta Cell Survival and Signaling Pathways: Effects of Type 1 Diabetes-Associated Genetic Variants.....	21
<i>Isortze Santin, Reinaldo S. Dos Santos, and Decio L. Eizirik</i>	
PART II PREDICTION	
Islet Autoantibody Analysis: Radioimmunoassays	57
<i>Rebecca Wyatt and Alistair J.K. Williams</i>	
Islet Autoantibody Detection by Electrochemiluminescence (ECL) Assay.....	85
<i>Liping Yu</i>	
Detection of C-Peptide in Urine as a Measure of Ongoing Beta Cell Function	93
<i>T.J. McDonald and M.H. Perry</i>	
PART III IMMUNOPATHOGENESIS	
Histology of Type 1 Diabetes Pancreas	105
<i>Abby Willcox and Kathleen M. Gillespie</i>	
Identification of Islet Antigen-Specific CD8 T Cells Using MHCI-Peptide Tetramer Reagents in the Non Obese Diabetic (NOD) Mouse Model of Type 1 Diabetes.....	119
<i>James A. Pearson and F. Susan Wong</i>	
Tracking Immunological Responses of Islet Antigen-Specific T Cells in the Nonobese Diabetic (NOD) Mouse Model of Type 1 Diabetes.....	127
<i>Terri C. Thayer and F. Susan Wong</i>	
Adoptive Transfer of Autoimmune Diabetes Using Immunodeficient Nonobese Diabetic (NOD) Mice	135
<i>Evy De Leenheer and F. Susan Wong</i>	

PART IV EVOLVING METHODOLOGIES

Methylation Analysis in Distinct Immune Cell Subsets in Type 1 Diabetes	143
<i>Mary N. Dang, Claire M. Bradford, Paolo Pozzilli, and R. David Leslie</i>	
Fluorescence In Situ Hybridization with Concomitant Immunofluorescence in Human Pancreas	153
<i>Jody Ye and Kathleen M. Gillespie</i>	
Laser Capture and Single Cell Genotyping from Frozen Tissue Sections	159
<i>Thomas Kroneis, Jody Ye, and Kathleen Gillespie</i>	
The Gut Microbiome in the NOD Mouse	169
<i>Jian Peng, Youjia Hu, F. Susan Wong, and Li Wen</i>	
Molecular Methods and Protein Synthesis for Definition of Autoantibody Epitopes	179
<i>Karen T. Elvers and Alistair J.K. Williams</i>	
<i>Index</i>	209

Type-1 Diabetes

Methods and Protocols

Gillespie, K.M. (Ed.)

2016, X, 213 p. 44 illus., 33 illus. in color., Hardcover

ISBN: 978-1-4939-3641-0

A product of Humana Press