

# Contents

## VII Preface

Pahernik, S. (Heidelberg)

## 1 Introduction

Wagner, H. (Munich); Hartmann, G. (Bonn)

## Chapter 1: Innate Immunity and Inflammation

---

### 4 Innate Immunity, Inflammation and Colorectal Cancer

Wang, K.; Grivennikov, S.; Karin, M. (La Jolla, Calif.)

### 11 Immunobiology of C-Type Lectin Receptors

Roth, S.; Thomas, C. (Munich); Ruland, J. (Munich/Neuherberg)

### 15 Mechanisms of IL-1 $\beta$ Maturation in Neutrophils

Mankan, A.K.; Hornung, V. (Bonn)

## Chapter 2: Innate Immunity and Transplantation

---

### 24 The Innate Immune System: Its Rediscovery before Toll Was Described

Land, W.G.; Messmer, K. (Munich)

### 29 Innate-Adaptive Immune Responses in Organ Ischemia/Reperfusion Injury

Ji, H.; Zhai, Y.; Kupiec-Weglinski, J.W. (Los Angeles, Calif.)

### 35 Tolerogenic Dendritic Cells in Transplantation: From Preclinical to Clinical Application

Moreau, A.; Cuturi, M.-C. (Nantes)

## **Chapter 3: Innate Immunity and Intestinal Microbiota**

---

### **43 Microbiota's Influence on Immunity**

Honda, K.; Tanoue, T.; Nagano, Y.; Atarashi, K. (Tokyo)

### **48 Inflammasomes and Mucosal Immune Response**

Elinay, E.; Henao-Mejia, J. (New Haven, Conn.); Flavell, R.A. (New Haven, Conn./Chevy Chase, Md.)

### **53 Microbial Endocrinology: An Evolution-Based Shared Mechanism Determining Microbiota's Influence on Health and Disease**

Lyte, M. (Abilene, Tex.)

## **Chapter 4: Innate Immunity and Disease Promotion**

---

### **59 Standing Guard: Innate Lymphoid Cells Promote Immunity and Tissue Homeostasis at Barrier Surfaces**

Monticelli, L.A.; Artis, D. (Philadelphia, Pa.)

### **73 miRNAs That Shape the Innate Immune System: Regulation through Toll-Like Receptor Signaling**

Curtis, A.M.; O'Neill, L.A.J. (Dublin)

### **80 Type 2 Diabetes and Islet Inflammation**

Donath, M.Y. (Basel)

### **86 The Innate Immune System in Alzheimer's Disease**

Beckert, H.; Halle, A. (Bonn)

### **91 Role of Inflammasomes in Obesity**

Dixit, V.D. (Baton Rouge, La.)

### **96 Gut-Brain Communication in the Regulation of System Metabolism**

Müller, T.D.; Pfluger, P.T.; Tschoöp, M.H. (Munich/Cincinnati, Ohio)

## **Chapter 5: *Drosophila* and Immunity**

---

### **103 Metabolism and Innate Immunity: FOXO Regulation of Antimicrobial Peptides in *Drosophila***

Loch, G.; Jentgens, E.; Bülow, M.; Zinke, I. (Bonn); Mori, T.; Suzuki, S.; Takeyama, H. (Tokyo); Hoch, M. (Bonn)

## **Chapter 6: Innate Signaling and Adaptive Immunity**

---

### **112 Dendritic Cells Orchestrate Innate Immunity against Bacterial Kidney Infection**

Tittel, A.P.; Heuser, C.; Garbi, N.; Kurts, C. (Bonn)

## **Chapter 7: Speakers at the Symposium**

---

### **120 Speakers at the Symposium**

### **127 Author Index**

### **128 Subject Index**