Preface

From October 15 to October 18, 2009, more than 1,100 delegates met in Hannover, Germany, to attend two subsequent events, the Falk Workshop 'Immunology and Liver Disease' dedicated to the 80th birthday of Karl-Hermann Meyer zum Bueschenfelde, a pioneer in liver immunology, as well as Falk Symposium No. 171 entitled 'Liver and Metabolic Syndrome'. World-renowned experts gathered in Hannover to discuss the latest developments in these two important areas of liver diseases.

'Liver and Immunology' has become one of the most important research areas in hepatology. The liver itself is part of the immune system and a target of various immune-mediated liver diseases as well. Immune mechanisms play a crucial role in the pathogenesis of viral hepatitis, autoimmune liver disease, liver cancer and liver transplantation. Today, we understand more than ever that the liver is also part of the body's own immune system. The role of the immune system was discussed describing the physiological role of the liver as part of the body's own immune system, as well as the role of immunopathogenesis in viral hepatitis, autoimmune liver disease, liver cancer and organ transplantation. Research in liver disease over the past decades has demonstrated that the application of basic science technology, such as immunology and molecular biology, leads to the discoveries that have an impact on the development of new diagnostic procedures, vaccines and therapies. One example is the discovery of the five major hepatotropic viruses, with the latest discovery being the hepatitis C virus exactly 20 years ago. The Falk workshop on 'Immunology and Liver Disease' was opened by a keynote lecture given by

Dr. Michael Houghton, who led the group of scientists who discovered the hepatitis C virus in 1989. Other examples are the identification of hepatocellular autoantigens as well as the elucidation of humoral and cellular immune reactions involved in the protection from, clearance of and immunopathogenesis of chronic viral hepatitis. The development of hepatitis A and B vaccinations is another good example of translational research in hepatology and immunology having an enormous impact on the health system worldwide.

Falk Symposium 171 'Liver and Metabolic Syndrome' discussed the liver as part of the metabolic syndrome. Metabolic disease in general is the most prevalent and eminent liver disease worldwide, particularly in the Western world. In recent years, it became obvious that alcoholic and non-alcoholic fatty liver disease (NAFLD) significantly contribute to the prevalence of end-stage liver disease including hepatocellular carcinoma. NAFLD forms the center of the metabolic syndrome and may be regarded as the tip of the iceberg. Therefore, hepatologists, gastroenterologists and endocrinologists focus their attention on this enormous world-wide problem. It is suspected that 20 million (out of a population of 80 million) Germans suffer from fatty liver and fatty liver disease. Falk Symposium 171 therefore focused on the epidemiology and natural history of NAFLD as well as genetic, environmental and metabolic factors associated with this disease. Of particular relevance is the interaction with the endocrinal system as well the immune system and the network of cytokines. The presentations of this symposium created a bridge between basic science

and therapeutic management of this disease spectrum. A particular emphasis was given to the multiple interactions between insulin resistance, diabetes mellitus, steatosis of the liver, hepatitis C and its consequences for therapeutic management. The organizers of the Falk Workshop as well as Falk Symposium 171, namely M.E. Gershwin, Davis (USA); A.W. Lohse, Hamburg (Germany); D. Vergani, London (Great Britain); C.P. Day, Newcastle upon Tyne (Great Britain); A.M. Diehl, Durham (USA); H. Lehnert, Lübeck (Germany); F. Negro, Geneva

(Switzerland); and M.P. Manns, Hannover (Germany) are thankful to the world-renowned experts who contributed to this symposium and provided manuscripts to be published in these proceedings. Hopefully, the proceedings will help readers better understand the relevance of these two important topics for hepatology and medicine in general.

Michael P. Manns, Hannover (Germany)
for the organizers of Falk Workshop
and Falk Symposium 171, Spring 2010