

Liver immunology: new perspectives

The liver not only fulfills manifold functions in metabolism, but is also a central organ for immunology. Due to its anatomical location, the liver is exposed to multiple antigens derived from the intestine, via the portal vein, as well as from the circulation, via the arterial system. Within the body, the liver is the organ containing the highest numbers of macrophages as well as various unconventional lymphocytes. The evolution of understanding the functional role and cellular contributors of liver immunology over the last decades has been remarkable and has revolutionized some of the traditional long-standing concepts in the field. Immune-mediated processes in the liver are of utmost importance to maintain homeostasis in the body, respond to infectious and to sterile (e.g., metabolic) injury as well as to resolve and regenerate after cessation of liver damage. Important aspects on liver immunology from recent research are summarized in a series of review articles in this and the following issue of *Hepatobiliary Surgery and Nutrition (HBSN)*.

Leading experts from the field share their current perspectives on “hot topics” in liver immunology with a focus on clinically relevant hepatic disease conditions. These include the disease-specific processing of initiating signals, cellular responders including stem cells, hepatic stellate cells and classical immune cells subsets, epigenetic factors like micro-RNA regulating cellular functions and soluble mediators triggering inflammation and tissue remodeling. Finally, the articles give an outlook on the translation of these cellular and molecular pathways into new clinical approaches to liver diseases.

We cordially thank the experts for their excellent overviews on these timely topics. Moreover, we are very grateful to the editors and staff of *HBSN*, but particularly Editor-in-Chief Yilei Mao and Editor Eunice X. Xu for their kind support in realizing this review series on liver immunology.



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