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Reviews

New trends in spleen research

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Editorial Remarks

It is hardly necessary to stress the significance of the spleen in research into the circulation of vertebrates. The manifold regulatory functions of this organ become particularly apparent in comparative physiological studies – here one thinks of the ground-breaking research in Basel directed by Friedrich Miescher with the Rhine salmon, Salmo salar L. With respect to higher vertebrates, key experiments were carried out on the high-altitude physiology of the spleen by Joseph Barcroft in the Andes. Thanks to Barcroft's work, we now recognize the spleen's function as a blood storage depot and its importance in the formation and destruction of red blood cells. It is the aim of our present multidisciplinary review to point out the newest structural and functional aspects gleaned from current spleen research. We are indebted to Dr. Robert McCuskey and Professor Leon Weiss for their critical reading of the individual contributions and for writing the 'framework' within which they are set. Our particular thanks go to Professor Friedrich Tischendorf for his assistance and advice throughout the organization of the review. Professor Tischendorf is author of now classic works on neuro-architecture and microcirculation of the spleen. He contributed major impulses to the substitution therapy for splenic loss and through his experimentation added to our knowledge of the function of the spleen in the reticulo-endothelial system as well as of protein metabolism in mammals.