



Glomerular Microenvironment: Cellular Stress in Chronic Kidney Disease

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Message from the Guest Editor

Chronic kidney disease (CKD) is a global public health problem that affects people from all segments of society. The renal glomerulus, and in particular the filtration barrier, is the main target of such disorders. Its structure constitutes a special and unique microenvironment whose integrity is maintained by the molecular interaction between three central components: the endothelial cell, the basement membrane, and the podocytes. This exquisite architecture must be finely preserved because its destabilization, through extraordinarily complex molecular mechanisms, can lead to the appearance of severe proteinuria.

The structural complexity of the glomerular microenvironment limits the availability of reliable experimental models. In this sense, recent advances in regenerative medicine, as well as the design of microfluidic platforms or other devices, constitute a plethora of promising models for the study of CKD.

This Special Issue aims to serve as a report on the state of the art of basic and translational research in the field of the pathogenesis of nephrotic syndrome: molecular mechanisms as well as new experimental models.





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Message from the Editor-in-Chief

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