



New Advances in Aquaporinopathy

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Message from the Guest Editors

The first aquaporin (AQP) was discovered as a water channel protein of human red blood cell, but many of later AQP members permeate not only water but many small solutes, ions (chloride and nitrate), arsenate, boron, silicon and even gases (CO₂, NH₃ and NO). Beyond these heterogeneities in channel function, functions other than channel have been discovered, such as cell membrane adhesion (AQP4), signal transduction (AQP2), stimulator of cell migration and wound recovery (AQP1, 3), trigger of auto-immune system (AQP4) and mediator of inflammation (AQP3). However, until now, aquaporinopathy which includes diseases and disordered conditions caused by AQP's dysfunction is recognized in a limited spectrum of diseases. There are 13 members of AQP in human and they are conserved through the evolution, implying that they play indispensable roles for survival that are easily overlooked in comfortable environment in modern life. Understanding aquaporinopathy is anticipated to reveal novel therapeutic targets in many diseases. This special issue will welcome papers focusing on AQP-related diseases and abnormal states, and their pathophysiology.





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Message from the Editor-in-Chief

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