

Special Issue

New Advancement in Membrane Transport Proteins

Message from the Guest Editor

Membrane transport systems including the solute carriers (SLC) are a key element for cell life since they regulated the flux of nutrients, metabolites, ions, neurotransmitters, toxic compounds and drugs through cell and organelles membranes. Among membrane proteins (26% of the human genome), transporters, account for 10 %. Derangements or malfunctioning of membrane transport systems can cause a wide range of diseases. In spite of their importance, the structure and function of many of these proteins are still unknown because they are very hydrophobic and usually are present in low amounts in the membrane. In recent years single particle cryoEM revolutionized structure determination of membrane transport proteins. However, the study of a transporter structure is far from its completion because structural dynamics, structure/function characterization and site-specific mutagenesis are required to understand the molecular mechanism and find the link of transporter defects with human pathology. In addition, high-throughput screening technologies for identification and over expression of membrane transport proteins are required to their study in vivo and in vitro.

Guest Editor

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