

蛋白構造生物学教室セミナー

Channels, Transporters and Receptors: Using molecular simulation to understand membrane proteins

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連絡先：蛋白構造生物学教室 清水敏之（内線：24840）

Abstract:

Membrane proteins are the gatekeepers of cells that rely on intricate conformational changes to move substrates or transmit signals across the membrane. This talk will describe a few examples from our lab where molecular simulations have been used to complement structural and functional experiments in order to understand the function of these different classes of membrane protein. Examples will include (i) A molecular mechanism for the lupus causing mutation in the RNA receptor TLR7, (ii) a proton-transfer mechanism for transport in the malaria parasites formate-nitrite transporter that challenges the standard definitions of channels and transporters, and (iii) the role of lipids in gating and modulating mechanically gated and voltage gated channels.