

## **Exploring Membrane Protein Functions and These Application to Drug Discovery from a Multilateral Perspective**

Masahiko IRIE<sup>1</sup>, Hirotake ISHIDA<sup>2</sup>

<sup>1</sup>Toho Univ., Facul. Pharm. Sci., <sup>2</sup>Univ. Shizuoka, Grad. Sch. Pharm. Sci.

---

Membrane proteins such as ion channels, transporters and receptors are the key players for the maintenance of body homeostasis, and their functional abnormality causes diseases. Many of intractable diseases and rare diseases are presumably caused by abnormalities in membrane proteins, and the development of revolutionary therapeutic agents is anticipated. Recent research has revealed the presence and function of novel membrane proteins. On the other hand, novel functions and control mechanisms of conventionally known membrane proteins are also intensively studied. The same membrane protein, located in different cells and tissues, may have distinct functions and control mechanisms. Therefore, at this symposium, we will discuss the physiological significance and drug reactivity of membrane proteins in various tissues from the central nervous system to immune cells, and broadly consider the possibility of novel therapeutic methods targeting membrane proteins. We hope that this symposium will be a great place for young researchers who will play a role in future pharmaceutical sciences.