

OS02 Photonics Meets Sensing of Bio-Reaction and Cell Dynamics

Yuriko HIGUCHI^{1,2}, Hidetaka AKITA³

¹Kyoto Univ. Grad. Sch. Pharm. Sci., ²PRESTO, JST, ³Hokkaido Univ. Grad. Sch. Pharm. Sci.

Recent progress in fluorescence probe and detection devices enabled us to demonstrate a live-imaging with high sensitivity, and remarkable time/spatial-resolution. These developments in optics provide us a novel technique to visualize, and further quantify the life processes. In drug discovery, understanding of i) molecular interaction, ii) molecular dynamics in the cells and iii) cellular disposition in the body are essential. Therefore, photonic sensing is a new promising tool for drug development. This symposium focuses visualization and analysis of biological process and dynamic trafficking in vitro and in vivo using photonic sensing. The bio-imaging is now opened for researchers in global fields. Thus, mutual communication between cross-cutting research is valuable. In this session, topics are composed from the fields of pharmaceutical sciences, sciences and medical sciences. We will present our recent findings from the point of view of development of fluorescent probe, establishment of photonic sensing methods, and application of imaging for drug development. We hope this symposium would provide new information about photonic sensing in the discovery and development of drugs.