

Industrial & Physical Pharmacy Seminar

IPPH 69600

Monday, September 27, 2021
3:30 PM in RHPH 164

“Activatable Imaging Probe for Receptor-Ligand Binding”



Professor Ick Chan Kwon

Center for Theragnosis, Korea Institute of Science and Technology
Dana Farber Cancer Institute

For decades, molecular imaging, capable of monitoring intercellular/intracellular molecular processes in organisms, has provided valuable information for a variety of research fields. Biomarkers such as enzymes, receptors, and proteins can provide information for early diagnosis of diseases and monitoring of therapeutic effects, and thus can be used as targets for molecular imaging. Among them, molecular imaging technology based on receptor-ligand interaction is emerging as a promising strategy for monitoring intractable diseases such as cancer. However, the basic requirement for this kind of imaging probe is to provide disease-specific information along with high imaging sensitivity. Here, we developed a self-quenching imaging probe capable of emitting fluorescence (activation) via a de-quenching reaction after internalization via receptor-ligand binding. Demonstrations of EGFR or CD47 target specific fluorescence signals will be presented in this presentation.