



IBS Center for Molecular Spectroscopy and Dynamics

COLLOQUIUM

- SPEAKER

Dr. Taejun Wang (Division of Integrative Biosciences and Biotechnology, POSTECH)

- TITLE

Advanced two-photon microscopy applications to biomedical researches

- ABSTRACT

Two-photon microscopy (TPM) is a nonlinear fluorescence microscopic technique widely applied for various biological studies including neurobiology, cancer biology and immunology since it provides three-dimensional (3D) cellular information within tissues based on endogenous and exogenous fluorophores. In this seminar, FDA-approved 4th generation fluoroquinolone antibiotic called 'Moxifloxacin' will be introduced as a novel two-photon (TP) imaging method for the biological studies. It could overcome several limitations of intrinsic autofluorescence-based TP imaging and apply to clinical studies. I present advanced TP imaging for visualization and monitoring the Paneth cells, key mediators for intestinal homeostasis by secreting antimicrobial factors, in the intact live mouse small intestine. Finally, I also present the development and improvement of gradient index (GRIN) lens-based rotational side-viewing endomicroscopic imaging probe system combined with TPM and optical coherence tomography (OCT) for in vivo studies of mouse colon. Furthermore, more issues on biomedical research using TPM will be discussed in interdisciplinary approaches in this seminar.

- DATE AND VENUE

March 21, 2017 (Tuesday, 4:00–5:00 p.m.)
Seminar Room 116, KU R&D Center

- LANGUAGE

Korean