# 第 40 回　若手研究セミナー
# The 40th NCC Young Researchers Seminar

**Date & Time: August 5, 2019 (Mon) 17:30-18:30**
**Room: 新研究棟セミナールーム (Tsukiji Campus),**
**先端医療開発センター3 階 セミナールーム 1 (Kashiwa Campus)**
**Chairperson: 間野 博行・研究所長 (Tsukiji Campus) ,**
**藤井 博史・分野長 (Kashiwa Campus)**

**1. The development of a high performance semiconductor SPECT scanner for medical use**

**Shin'ichiro TAKEDA** (Division of Functional Imaging, Kashiwa Campus)

**Abstract**: Currently, radionuclide therapy using alpha emitters is attracting strong attention in the field of oncology and the evaluation of biodistribution of small amount of radionuclides is needed to successfully perform this therapy. As we have been engaged in the development of high performance detectors for cosmic rays by using CdTe semiconductor detectors, we are now considering to translate this technology to medical use.

**2. Aurora kinase blockade drives *de novo* addiction to EGFR signaling in squamous cell carcinoma**

**Masayuki KOMATSU** (Department of Translational Oncology, FIOC, Tsukiji Campus)

**Abstract**: Oncogene addiction is a hallmark of cancer; however, cancer cell heterogeneity on the addiction often hampers targeted therapies. Here, we demonstrate blockade of Aurora A and B universally induced *de novo* addiction to an EGFR signaling *via* an endocytic recycling machinery. Pharmacological inhibition of Aurora and EGFR synergistically induced apoptosis of squamous cell carcinoma cells. This concept may therefore contribute the patients with unmet medical needs.

**3. Specific gut bacteria are associated with fluorouracil-induced toxicity**

**Satoshi SHIBA** (Division of Cancer Genomics, Tsukiji Campus)

**Abstract**: Chemotherapy induced adverse events (AEs) are common side effects in patients receiving chemotherapy for cancer. The aim of our study was to explore the association between gut microbiota and AEs from the fluorouracil (5-FU)-related regimen in resected colorectal cancer patients. In the present study, a specific gut microbiota is associated with 5-FU induced AEs. It may provide novel insights into the prevention and treatment of chemotherapy-induced side effects.