

Seminar

Unlocking the Secrets of Longevity and Cancer Resistance in Bats

Bats exhibit exceptional longevity and cancer resistance despite their small body size, yet the underlying mechanisms remain elusive. We discovered that bats express extraordinarily high levels of ABCB1, a drug efflux transporter, across multiple tissues, protecting cells from genotoxic compounds. Unexpectedly, our recent studies using mice ubiquitously expressing bat ABCB1 revealed a previously unrecognized role in metabolic regulation, potentially contributing to metabolic resilience and longevity. Paradoxically, ABCB1 overexpression in human cancers drives multidrug resistance by reducing intracellular anticancer drug accumulation. To overcome this challenge, we have developed novel ABCB1 inhibitors inspired by bat biology, aiming to restore chemotherapy sensitivity. This seminar will discuss how bat studies may provide new insights into aging and inspire innovative cancer therapies.

Dr. Koji Itahana

Associate Professor

Cancer & Stem Cell Biology Program

Duke-NUS Medical School, Singapore

Date and Time

14:00-15:30

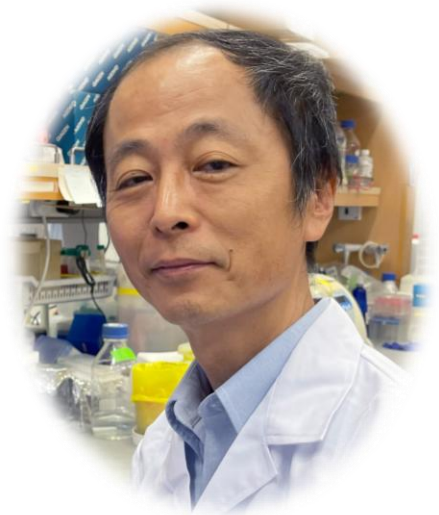
Friday, November 27, 2026

Venue

Biken Hall, 1F, Main building,

Research Institute for Microbial Diseases (RIMD)

The University of Osaka



※ This seminar is conducted in English and is eligible for course credits at the Graduate School of Medicine and the Graduate School of Frontier Biosciences.

(No registration required)



RIMD

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