

## General Information

- ◆ Approved in FY 2018
- ◆ Established in April 2020
- ◆ Established by the Graduate School of Medicine
- ◆ Partner institution: The AIRC Institute of Molecular Oncology (IFOM ETS), Italy
- ◆ Location: Kyoto University, Kyoto, Japan (inbound)
- ◆ Purposes: Promotion of international research collaboration through the establishment of an international joint laboratory on the campus of the KU Graduate School of Medicine, co-funded by IFOM ETS and Kyoto University.
- ◆ Functions: Advanced cancer biology research and training of graduate students and early-career researchers.

## Positive ripple effects on the university's activities

- Boost research activity by bringing together the knowledge and expertise of both institutions.
  - Foster global human resources by internationalizing the research environment
  - Create innovation through interdisciplinary academic collaboration
- [FY 2025]**
- Promotion of research collaboration and publication of internationally co-authored academic papers.
  - Development of international joint research through the hosting of multiple international students including a MEXT scholarship student and JSPS Research Fellowship for Young Scientists recipient, and foreign researchers.
  - Hosting multiple international students through the AMGEN Scholars Program and Kyoto University's General Exchange Special Research Student system etc., to contribute to the university's internationalization efforts.
  - Deepening of international exchange through short-term hosting at IFOM ETS.

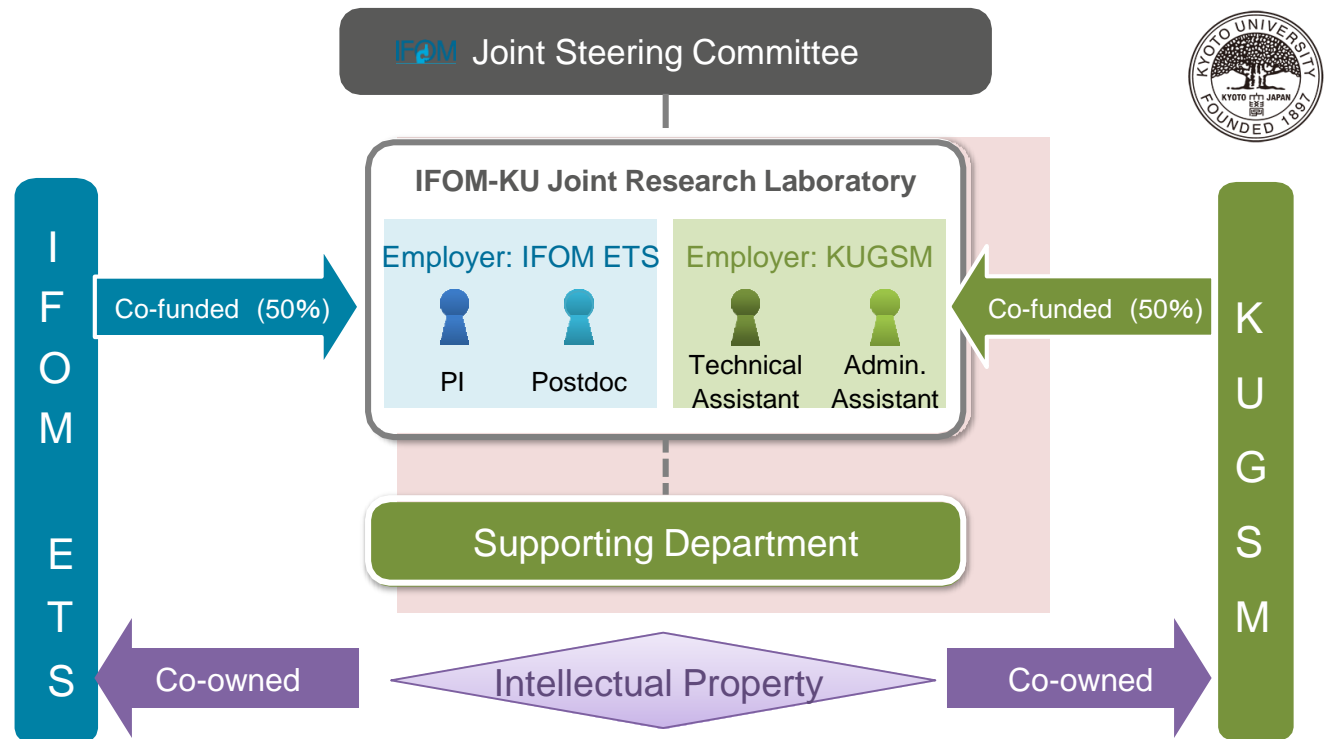
## Activity Overview

### About IFOM



IFOM ETS is an institution dedicated to the study of the molecular processes of cancer. It was established by the Italian Foundation for Cancer Research (FIRC) and boasts the largest-scale and best facilities in Europe. Numerous high-quality research projects are being conducted there.

KU's Graduate School of Medicine has an ongoing relationship with IFOM ETS. Since the conclusion of departmental academic and student exchange agreements in 2010, the two institutions have been implementing research and student exchange actively through holding joint symposiums, etc.



## Main Activities in FY 2024

### ① Research outcomes

- Articles

Diana Romero-Zamora<sup>#</sup>, Samuel Rogers<sup>#</sup>, Ronnie Ren Jie Low, Andrew B. Robinson, Scott G. Page, Blake JE Lane, Noa Lamm, Fuyuki Ishikawa, **Makoto T. Hayashi**<sup>\*</sup> and Anthony J. Cesare<sup>\*</sup>, A CPC-shelterin-BTR axis regulates mitotic telomere deprotection, **Nature Communications**, 2025, March 17, <sup>#</sup>Equal contribution, <sup>\*</sup>Co-corresponding authors

- Conference presentations

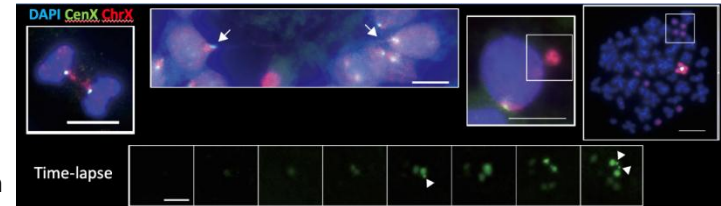
Yuki Sato and **Makoto T. Hayashi**, Micronucleus Derived from Chromosome Fusion Is Not a Potent Inducer of cGAS-STING Pathway, EMBO Workshop Telomere function and evolution in health and disease, Roma, Italy, May 6-11, 2024;

Yuki Sato and **Makoto T. Hayashi**, Micronucleus Derived from Chromosome Fusion Is Not a Potent Inducer of cGAS-STING Pathway (invited lecture), 96<sup>th</sup> Annual Meeting of the Genetics Society of Japan, Kochi, September 4-6, 2024

Diana Romero-Zamora, Placide Niyonshuti, Samuel Rogers, Anthony J Cesare, Makoto T. Hayashi, RECQ Regulatory Mechanisms of M-phase Telomere Deprotection by Factors, the 42<sup>nd</sup> Chromosome Workshop, the 23<sup>rd</sup> Nuclear Dynamics Workshop, Oita, January 29-31, 2025

- Acquisition of external funding

Grant-in-Aid for Challenging Research (Exploratory), Takeda Research Grant (Cancer Category), Enzyme Research Grant FY 2024



Analysis of the fate of X chromosome fusion by the chromatid fusion visualization system (FuVis)

### ② Education, internationalization, and outreach

- Education and internationalization

The laboratory hosted:

IFOM ETS post-docs: 1 (Nigerian)

Research assistants: 3 (1 Mexican, 2 Japanese)

Researchers/master's/doctoral students: 5 (2 Rwandan, 1 Mexican, 1 Chilean, 1 Japanese)

Short-term international students (AMGEN Scholars Program): 1 (Kazakhstan)

Meetings with IFOM ETS

PI chalk-talk meetings (online or onsite, once per month), PI meetings (online, once per month), PI retreat (Italy, October 7-9, 2024)

- Education and outreach

IFOM-KU Joint Graduate Student Symposium (Milan, Italy, February 19, 2025)



The IFOM-KU Joint Research Laboratory