

Alexis Barr

Imperial College London

Thursday, June 4, 2026

14:00-15:00

1F Auditorium, DB Building C, Kobe / Broadcast online via Zoom

※This seminar is open only for BDR Members

Discovery research for better cell cycle targeting in cancer

Summary

The Barr lab are investigating how cells control cell cycle entry, that is how cells return to cycle from quiescence. Tight control of these mechanisms is essential for normal development and tissue homeostasis. Dysregulation of these pathways leads to uncontrolled proliferation and cancer, a key focus of our lab. In the last decade, there has been a resurgence in targeting cell cycle mechanisms to treat cancer. While effective in some cancer types, we still lack a full understanding of cell cycle control to be able to use these new drugs in intelligent ways in patients. Our lab combines quantitative, single-cell time-lapse imaging with proteomics, bioinformatics, molecular biology and mathematical modelling to understand cell cycle control and how this information can be used to manipulate cell cycle entry to prevent tumour cell proliferation. I will present our recent work on CDK4/6 inhibitors and how they cause long-term anti-proliferative effects in cancer and our latest work identifying a new role for Wee1 in cell cycle entry.