Center for Cancer Immunotherapy and Immunobiology

The 37th CCII Seminar

京都大学 KYOTO UNIVERSITY

July 9, 2025 (Wed) 3:00pm - 4:00pm

Venue: Nitori Hall, Bristol Myers Squibb Building

Dr. Ian Watson

Member, Rosalind and Morris Goodman Cancer Institute
Investigator, Research Institute-McGill University Health Center (RI-MUHC)
Canada Research Chair II in Functional Genomics of Melanoma
Associate Professor, Department of Biochemistry, McGill University

"The NF1 tumor suppressor regulates PD-L1 and immune evasion in melanoma"

Immune checkpoint inhibitors (ICI), which include monoclonal antibodies against PD-1 (e.g. nivolumab, pembrolizumab) and CTLA-4 (e.g. ipilimumab), have been the biggest breakthrough in the treatment of advanced melanoma. As not all patients respond to ICIs in melanoma, more work is needed to identify biomarkers that predict response as well as new drug targets. In 2015, we characterized a novel genetic subgroup of melanomas driven by loss-of-function (LoF) mutations in the RAS-GAP tumor suppressor, NF1, in ~15% of cases (TCGA, 2015). Subsequent next-generation sequencing studies (NGS) reported that mutations in NF1 are enriched in cutaneous melanoma patients responding to anti-PD-1 ICIs. The reason for this is not entirely clear. In my presentation, I will present data demonstrating how NF1 loss in melanoma promotes immune evasion through the PD-L1/PD-1 axis, which may help explain the improved anti-PD-1 responses observed in NF1 mutant melanoma patients. Our study provides support to investigate anti-PD-1 therapy in other malignancies with NF1 mutations.

Admission free
No advance registration required.
Mark your calendar and join us!

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