



RESEARCH TOPIC MECM16

Evaluating the Impact of Proton Pump Inhibitors and mucosal protecting natural derived compound on Immune Checkpoint Blockade Efficacy MECM standard

Research Area

Immunology

Laboratory name

Mucosal immunology and microbiota Lab

Research Supervisor

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Abstract

Immune checkpoint inhibitors (ICB) have improved survival in cancers like melanoma and NSCLC, but many patients do not respond. ICB efficacy is linked to gut microbiota composition, and fecal transplants can boost response in refractory patients. A meta-analysis of 20,042 patients with NSCLC and urothelial cancers showed that proton pump inhibitors (PPI) reduce ICB efficacy, though this is debated in melanoma. PPI alter the microbiota, potentially impairing ICB indirectly. In contrast, a natural derived compound, which protects mucosa without affecting microbiota, might not interfere with ICB. This study aims to elucidate the impact of PPI and this natural derived compound on ICB efficacy in mouse models of tumors treated with ICB.

Main technical approaches

While theoretical knowledge in tumor immunology and microbiology is preferred, it is not a mandatory requirement for this position.

Scientific references

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Type of contract

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