

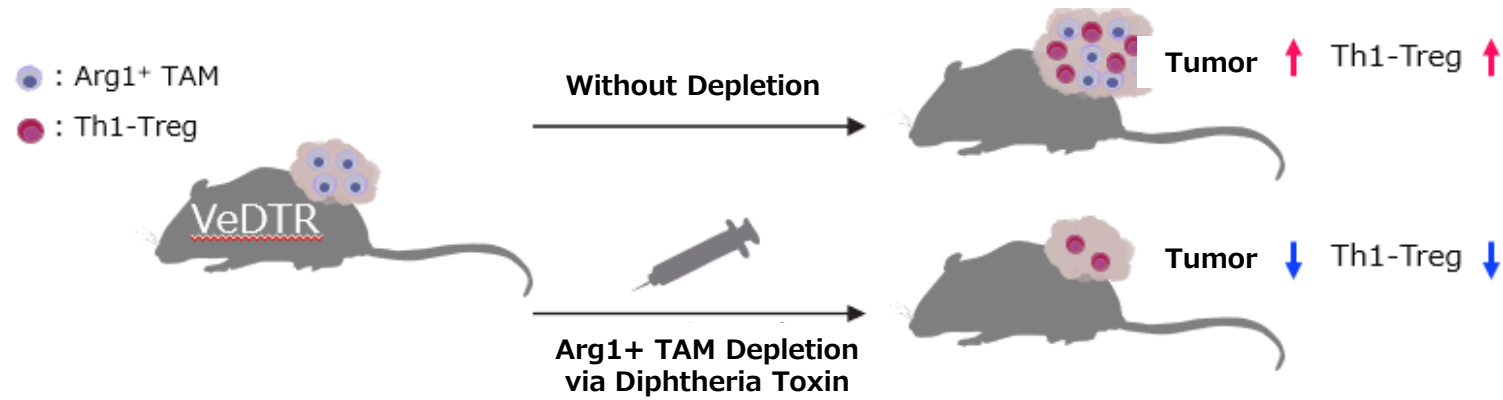
PF4 as a Novel Target for Cancer Therapy

The advent of immune checkpoint inhibitors has revolutionized cancer therapy. However, their clinical application is often limited by immune-related adverse events, particularly the induction of autoimmune diseases. In this study, Yamamoto and colleagues identified platelet factor 4 (PF4) as a novel therapeutic target through analyses using a specialized mouse model. PF4 demonstrated robust anti-tumor efficacy without triggering autoimmunity. These findings suggest that PF4 may serve as a central component of next-generation cancer immunotherapy.

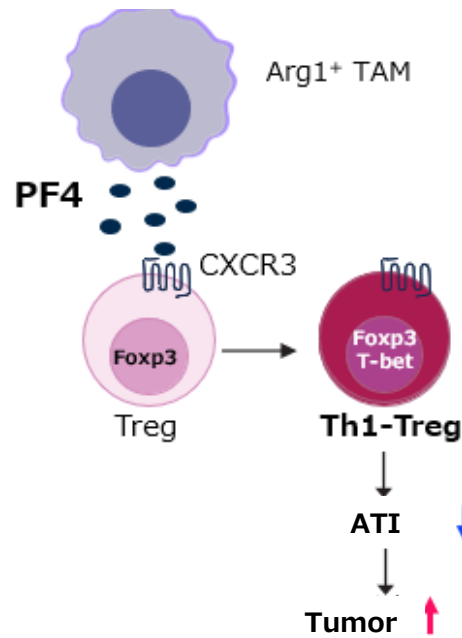
【 References 】

- https://www.biken.osaka-u.ac.jp/files/_ck/files/2023OkamotoYamamoto-CellRep-2.pdf
- https://www.biken.osaka-u.ac.jp/files/_ck/files/researchtopics/2024/2024%E5%BE%AE%E7%A0%94PR-KurataniYamamoto-Science.pdf

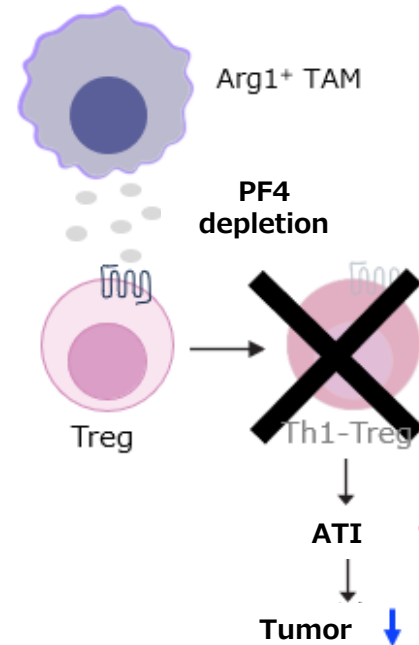
Potent as Total Treg Depletion — Without Autoimmunity



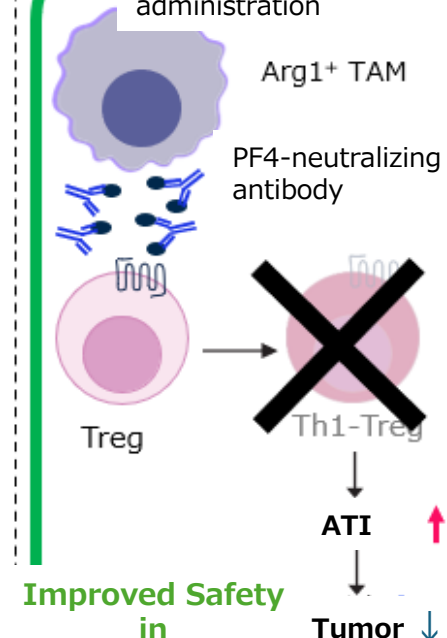
Within the tumor
Wild mice



PF4-deficient mice



Neutralizing antibody
administration



Improved Safety
in
Immunotherapy

ATI : Anti-Tumor
Immunity

Kuratani et al. *Science* (2024)

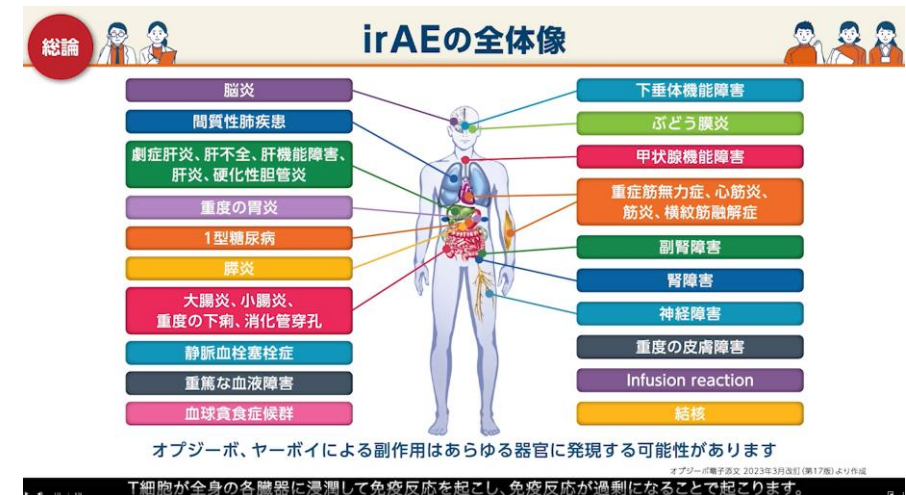
Potential of Th1-Tregs to Mitigate Immune-Related AE

- As the fourth cancer treatment modality, immunotherapy has gained widespread use.

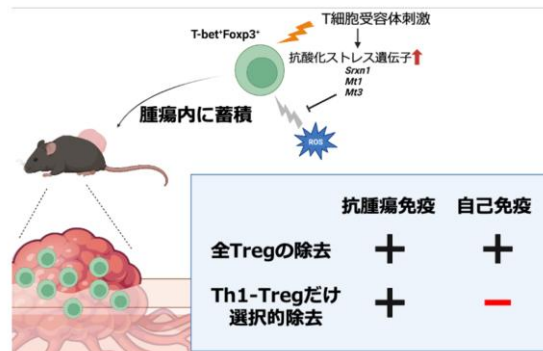
Nivolumab
(anti-PD-1 ab) **Ipilimumab**
(anti-CTLA-4 ab)



Autoimmune-related adverse event remain a challenge.



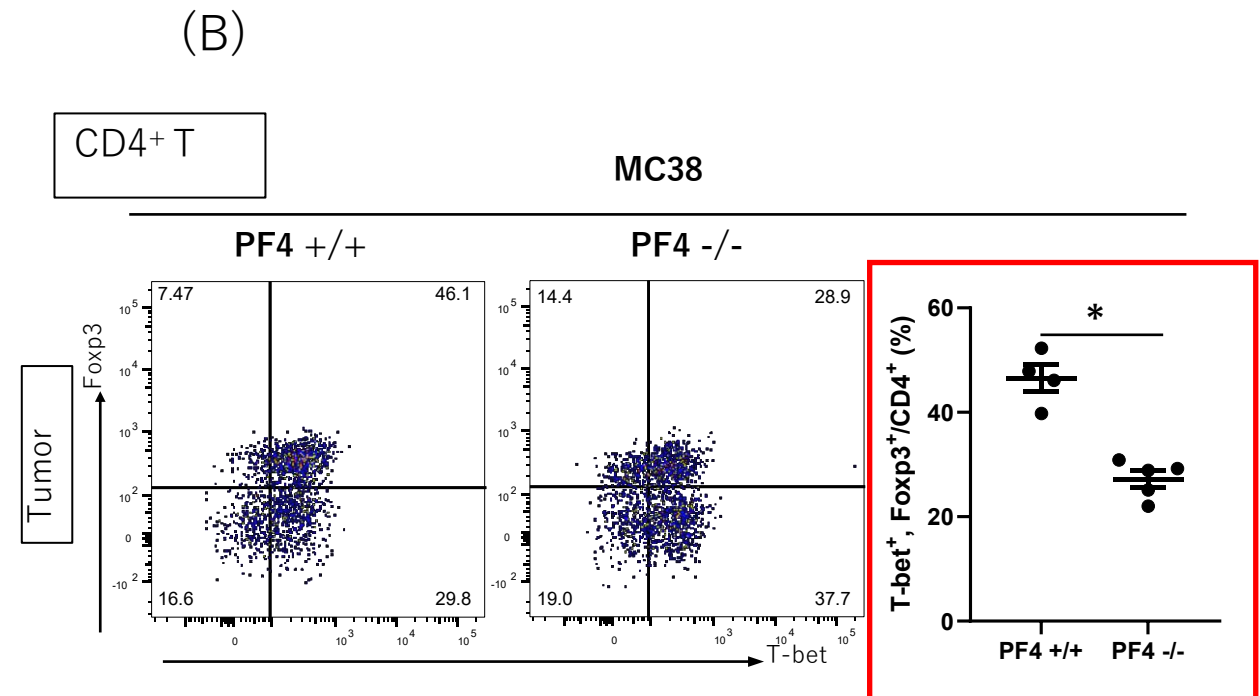
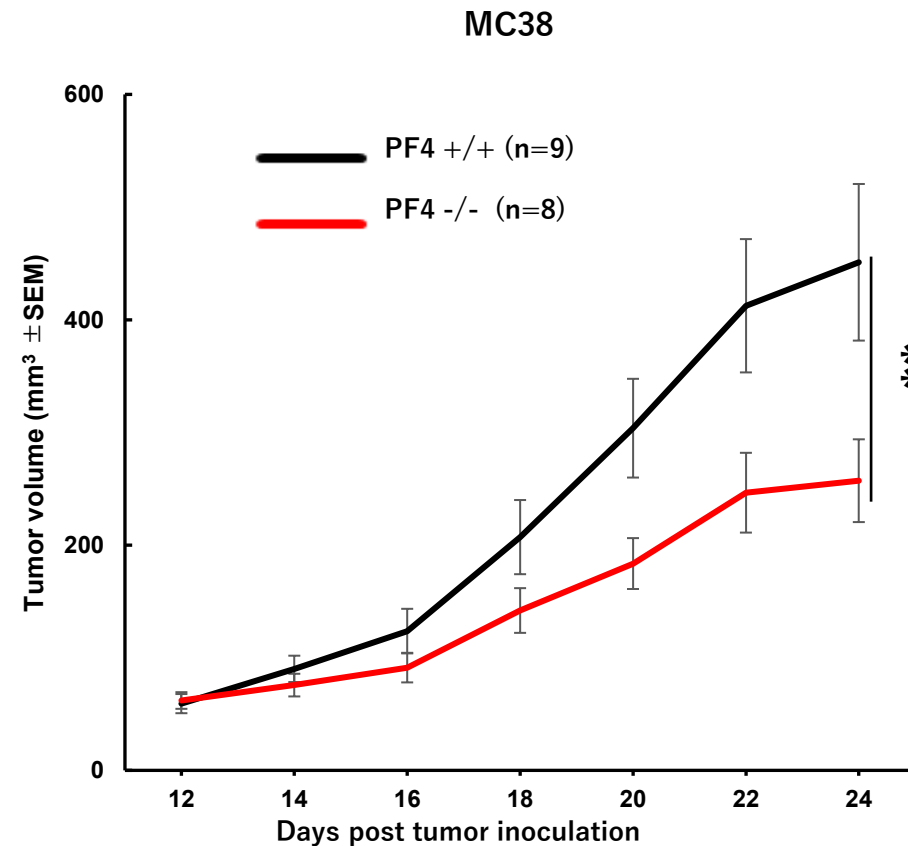
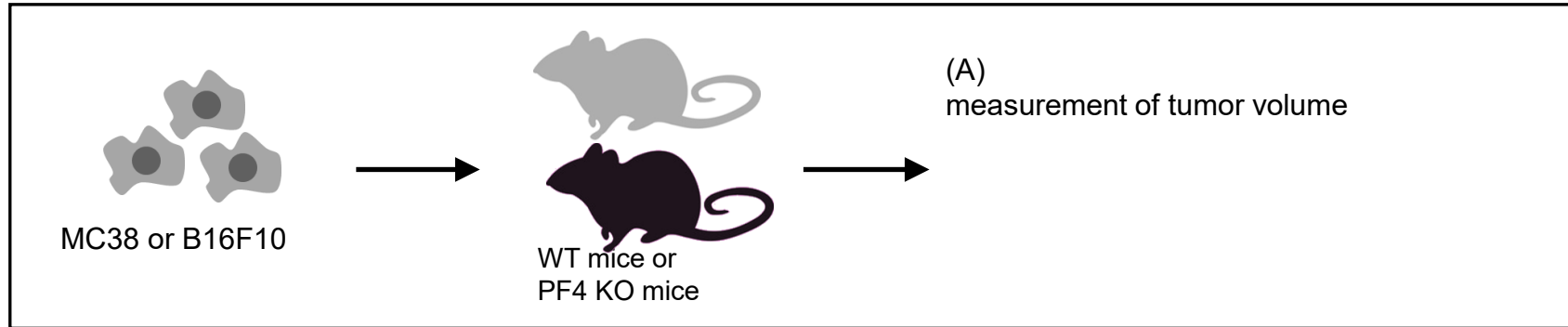
The potential of Th1-Tregs was demonstrated.



Okamoto et al. Cell Rep. (2023)

While Th1-Tregs exhibit potential, suitable drug targets have not been identified.

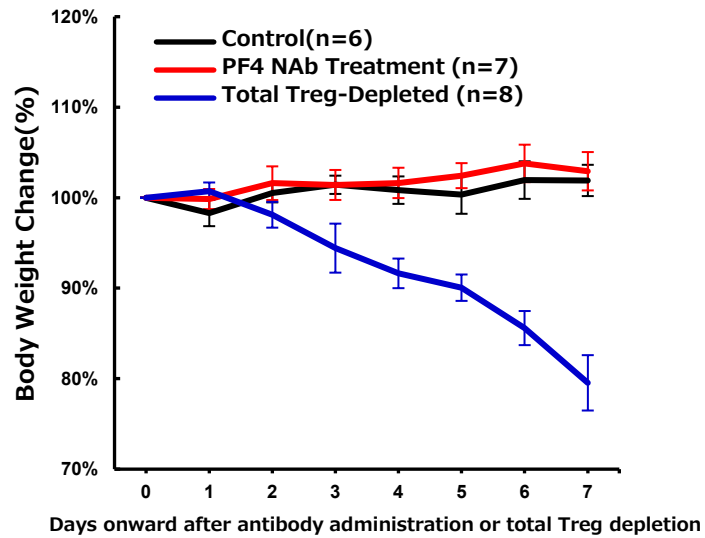
PF4 Deficiency: Key to Reducing Th1-Tregs and Tumor Size



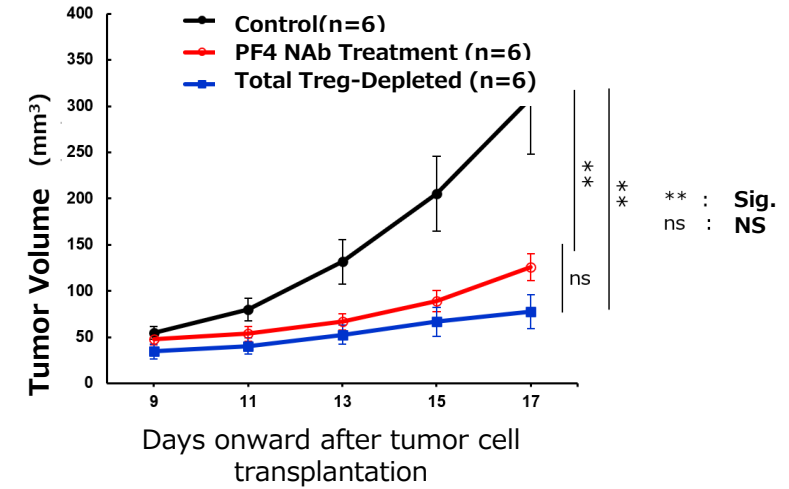
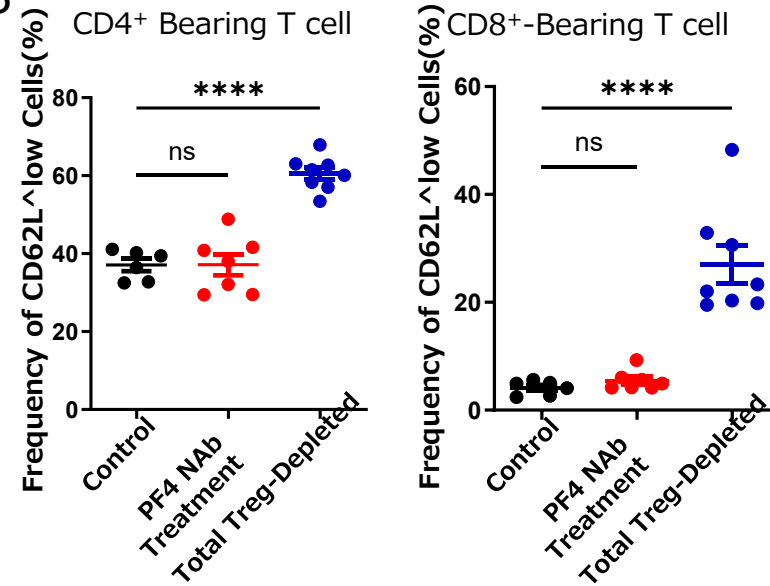
Can PF4 Become a Novel Target for Cancer Immunotherapy?

PF4 Ab Neutralization: Strong Antitumor Effect, No Autoimmune Risk

A



B



Proposal

If you are interested in exchanging information or exploring opportunities for technical collaboration based on the following points, please feel free to contact us.

- VeDTR mice enabling the discovery of novel drug targets.
- Development of innovative cancer immunotherapy targeting PF4.