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研究発表報告書

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実施結果:

I feel deep gratitude for the Tadamitsu Kishimoto International Travel Award to give me an opportunity to attend the 2017 American Association of Cancer Research (AACR) – Tumor Immunology and Immunotherapy meeting in Boston, USA. Nowadays, the mainstream of tumor immunotherapy has divided into five different strategies included (1) personalized therapy using tumor-specific neoantigen vaccine, (2) adoptive cell therapy (ACT) engineering TCR/CAR, (3) combination therapy of immune checkpoint blockade with conventional treatments, (4) combination therapy of anti-Treg antibodies with stimulators, and (5) other new technologies to improve molecular targeting and therapeutic efficacy. The new page of cancer immunotherapy is opened.

In meeting, I presented in poster session titled “Low-dose HMGN1 synergistically enhances anti-tumor immunity in CD4 depleting antibody-treated mice”. Our team focused on the novel combination therapy of anti-CD4 depleting antibody with HMGN1 protein, which resulting in the increase of tumor-associated CD137<sup>+</sup>PD-1<sup>+</sup>CD8<sup>+</sup> T cells, the decrease of both immunosuppressive CD4<sup>+</sup> regulatory T cells and exhausted LAG-3<sup>+</sup>CD8<sup>+</sup> T cells to exert robust anti-tumor effects in mice. It was a great experience to introduce and discuss our work with well-known overseas scientists.

In addition to each workshop, distinguished speakers gave us expressing speeches about each topic of tumor immunology and immunotherapy. Philip D. Greenberg showed how engineering T cells eradicate tumors. James P. Allison introduced the new insights, opportunities, and prospects of immune checkpoint blockade treatment in patients. Carl H. June updated the information of using CAR T cells against cancer in clinic. Nicholas P. Restifo identified several essential genes, related to metabolic regulation of immune responses, for cancer immunotherapy. In the end of meeting, Giorgio Trinchieri explained the complex relationship between cancer development and microbiome in the last session of workshop.

To sum up, the 2017 AACR tumor immunology and immunotherapy meeting broadened my vision and understanding. I felt proud to present in this high competitive meeting as the member of Japan Society of Immunology (JSI). I deeply appreciated the financial support from the Tadamitsu Kishimoto International Travel Award, the opportunity given from JSI chairman and committee members, the research support from Ueha Satoshi, and the recommendation from Kouji Matsushima. Many thanks.