ID No.	K1009
Project Title	Collaborative Translational Research of novel restrictive investigational cancer vaccine for multiple myeloma
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Report

The use of cancer immunological therapeutics to trigger a anti-multiple myeloma (MM) response presents multiple advantages over other treatment options, including low toxicity, ability to target multiple tumor antigens, use in combination treatment regimens. For example, an investigational peptide-based vaccine derived from highly expressed antigens in MM demonstrated a safe profile; peptide-specific anti-MM responses were induced in patients with smoldering MM.

In this collaborative project, we first discussed how to promote to develop novel cancer-immunotherapy against MM. First, we discussed the importance to conduct of clinical trial of immune-cancer therapy in Asia as well as US since population frequencies of human leukocyte antigen (HLA) are ethnically different. Second, we discussed the importance to establish novel method to evaluate T cell activation in clinical trial as well as non-clinical trial better than conventional method because conventional method such as detection and analysis of IFN-γ which is not sufficient with quantitatively and reproducibility due to process of cell culture with long duration. Since Dr. Yasui are developing of novel immunological assay to evaluate T cell activation quantitatively and promptly without cell culture at IMSUT, we next discussed the usefulness and feasibility to introduce the assay to evaluate T cell activation to develop cancer-immunotherapy such as cancer vaccines as well as the adaptive engineering T cells. We have started to study to measure activity of gene engineering T cells at IMSUT and some data on this assay are currently being analyzed.