

# 学 位 論 文 の 要 旨

三 重 大 学

所 属	甲 三重大学大学院医学系研究科 生命医科学専攻 個別化がん免疫治療学講座 個別化がん免疫治療学分野	氏、名	WANG YIZHENG
<p>主論文の題名</p> <p>CAR-Modified Vy9V82 T Cells Propagated Using a Novel Bisphosphonate Prodrug for Allogeneic Adoptive Immunotherapy.</p> <p>主論文の要旨</p> <p>The benefits of CAR-T therapy could be expanded to the treatment of solid tumors through the use of derived autologous <math>\alpha\beta</math> T cell, but clinical trials of CAR-T therapy for patients with solid tumors have so far been disappointing. CAR-T therapy also faces hurdles due to the time and cost intensive preparation of CAR-T cell products derived from patients as such CAR-T cells are often poor in quality and low in quantity. These inadequacies may be mitigated through the use of third-party donor derived CAR-T cell products which have a potent anti-tumor function but a constrained GVHD property. Vy9V82 TCR have been shown to exhibit potent antitumor activity but not alloreactivity. Therefore, in this study, CAR-T cells were prepared from Vy9V82 T (CAR-<math>\gamma\delta</math> T) cells which were expanded by using a novel prodrug PTA. CAR-<math>\gamma\delta</math> T cells suppressed tumor growth in an antigen specific manner but only during a limited time window. Provision of GITR co-stimulation enhanced anti-tumor function of CAR-<math>\gamma\delta</math> T cells. Our present results indicate that, while further optimization of CAR-<math>\gamma\delta</math> T cells is necessary, the present results demonstrate that Vy9V82 T cells are potential source of 'off-the-shelf' CAR-T cell products for successful allogeneic adoptive immunotherapy.</p>			