

## 第40回日本免疫学会学術集会テクニカルセミナー

### PROPHYLACTIC CANCER VACCINES BASED ON TUMOR ASSOCIATED ANTIGENS (ABNORMAL SELF)

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【日時】 2011年11月28日(月) 12:50~13:50

【会場】 **L会場 (304)** 「セミナー弁当引換券」を発券デスクにてお受け取り下さい

#### Abstract

Our work defines the difference between self/tumor antigens to which tolerance is maintained and abnormal self/ tumor antigens perceived by the immune system as foreign and thus are superior candidate antigens for safe and effective cancer vaccines. Our recent findings implicate abnormal self antigens in immunosurveillance of cancer as well as diseases other than cancer, such as viral infections and chronic inflammatory diseases. Unpublished results will be presented to show that viral infections can generate adaptive immune memory for abnormal self that protects from cancer challenge.

An example of an abnormal self/tumor antigen is MUC1 mucin. To determine the mechanisms that maintain tolerance to normal MUC1 (self) and allow immunity to tumor MUC1 (abnormal self), we generated TCR transgenic mice specific either for a normal MUC1 peptide or a tumor-associated glycopeptides form of the same antigen. TCR transgenic T cells were adoptively transferred into either WT or MUC1 transgenic mice and their ability to be activated by the peptide versus the tumor associated glycopeptide was explored using immunological assays and gene array approach. Unpublished results will be presented that suggest a novel mechanism of self tolerance based on the control of expression of proteolytic enzymes in antigen presenting cells. Data will also be presented from a recently completed clinical trial of a MUC1 vaccine for colon cancer prevention.