

# Generation and Preparation of Monoclonal Antibodies Specific to *Orientia tsutsugamushi*

## Abstract:

Following the research proposal of the second year, four Taiwan isolates of *Orientia tsutsugamushi* (OT), strains of Taitung-1, -2, -4 and Hualien-1 have been prepared and immunized into Balb/c mice. After fusion and selection of hybridoma, 24 monoclonal antibodies (MoAbs) specific to OT have been successfully generated and characterized. Two MoAbs against 60 kDa antigen and five against 56 kDa antigen from OT were acquired from the mouse immunized with Hualien-1. Three MoAbs against each of 47, 56, and 60 kDa, and one against 35 kDa antigen of OT were acquired from mouse immunized with Taitung-2 strain. Three anti-47 kDa and each one of anti-53, 56, and 70 kDa antigen of OT were acquired from the mouse immunized with Taitung-4 strain. Interesting finding is after immunization with Hualien-1, two MoAbs (2-11E and 9-1G) recognizing 60 kDa antigen of other strains of OT but not Hualien-1. The mechanism, how such a bias of immune response has been initiated by different strain of OT, has not cleared yet. However, the potential of these MoAbs in application to basic research tool and to clinical diagnosis was confirmed by the successful establishment of MoAbs 23-11B (Taiwan H-specific) and 2-11E (Gilliam-specific)

Keyword: *Orientia tsutsugamushi* 、 Monoclonal Antibody 、 47Kda