

S12-5 Gut immune system for the development of mucosal vaccine and immunotherapy

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Gastrointestinal tracts are continuously exposed to the outside environment and encountering large numbers of antigens and microorganisms. To achieve immunosurveillance and immunological homeostasis simultaneously in the harsh environments of the gastrointestinal surfaces, gastrointestinal tissues equip the unique mucosal immune system, tightly regulating a state of opposing but harmonized immune activation and quiescence. In some cases, disordered mucosal immune system leads to the development of undesirable mucosa-associated immune diseases such as food allergy and inflammatory bowel diseases. In this presentation, I will show our recent data on the uniqueness of gut immune system and its application to mucosal vaccine and immunotherapy.