



Dec 10, 2019

FunPep Co., Ltd.

Publication of Antibody-inducing Peptide Technology
—Research results on the mechanism of action of AJP001—

FunPep Co., Ltd. (FunPep) is pleased to announce that a paper on AJP001, the foundational technology for antibody-inducing peptides that we have been developing in collaboration with Osaka University Graduate School of Medicine, has been published in *The Federation of American Societies for Experimental Biology BioAdvances* (FASEB BioAdvances).

Title: AJP001, a novel helper T - cell epitope, induces a humoral immune response with activation of innate immunity when included in a peptide vaccine
<https://onlinelibrary.wiley.com/doi/10.1096/fba.2019-00056>

◇Details & Significance

Antibody-inducing peptides are a type of vaccine that utilizes the immune system and consists of a "B cell epitope" to identify the target molecule and a "helper T cell epitope" (carrier protein) to induce an immune response. Normally, KLH (keyhole limpet hemocyanin) and VLP (virus-like particles) are used as carrier proteins; however, due to their large molecular weights, there are concerns about manufacturing quality assurance, such as control of the conjugation reaction between the B cell epitope and the carrier protein, production of antibodies to the carrier protein, and adverse immune reactions, such as allergies and anaphylaxis, to the biological carrier protein.

The paper shows that the relatively small molecular weight of AJP001 (20 amino acids) acts as a "helper T-cell epitope," potentially addressing concerns about manufacturing problems and adverse immune reactions. Furthermore, AJP001 activates innate immunity, indicating that adjuvants, which are usually administered in combination with antibody-inducing peptides, may not be necessary.

FunPep has been conducting research and development of antibody-inducing peptides using AJP001, with our lead product FPP003 in a Phase I/IIa clinical trial for psoriasis (Australia), and FPP004 in a preclinical trial for pollinosis (seasonal allergic rhinitis). We will continue to create antibody-inducing peptides against a variety of target molecules into the future.