

HER-2 B Cell Epitope Peptide-Based Cancer Vaccines and Combination Immunotherapies with EGFR, HER-3, IGF-1R, VEGF and a novel PD-1 Vaccine

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We have created and established a portfolio of validated B-cell peptide epitopes against multiple receptor tyrosine kinases to expedite the development of new paradigm shifting cancer immunotherapies. We have identified the most biologically effective combinations of EGFR (HER-1), HER-2, HER-3, VEGF, IGF-1R and PD-1 peptide vaccines/mimics to selectively inhibit multiple receptors and signaling pathways. We have translated two HER-2 combination peptide vaccines to the clinic in a Phase 1/2b trial to safely deliver curative and transformative cancer immunotherapies to advanced cancer patients. The potential safety, efficacy, durability, usability and cost a B-cell peptide vaccine may/could benefit a variety of patients: Stimulates the immune system to produce natural Abs, potentially safer, Stimulates the immune system to produce natural Abs, potentially safer, Antibodies continuously produced a lasting immune response to inhibit tumor recurrence, Antibodies continuously produced a lasting immune response to inhibit tumor recurrence.

This presentation will detail our clinical trial and basic studies based on the development of combinatorial immunotherapeutic strategies that act synergistically to enhance immune-mediated tumor killing aimed at addressing mechanisms of tumor resistance for several tumor types. We will discuss the novel combinations of HER-2 and PD-1 vaccines.

Biography:

Dr. Kaumaya is Professor of Medicine in Department of Ob/Gyn at the OSU Wexner Medical Center and the James Comprehensive Cancer Center. Dr Kaumaya is internationally recognized as an expert in the fields of vaccine research with emphasis on peptide vaccines for cancer, viral diseases as well as peptide therapy for autoimmune diseases. He conducts research in the areas of tumor immunology, mechanisms of tumor cell-immune cell interactions, and immune mechanisms. The laboratory functions as an integrated translational research program with the goal of designing and developing new immunotherapies and immunologic strategies for cancer treatment and prevention. He is an inventor on several issued and pending patents for Peptide Vaccines and Therapeutic Technologies.