

Specific immunogenicity of heat shock protein-peptide complexes: new developments

Pramod Srivastava

Center for Immunotherapy of Cancer and Infectious Diseases, University of Connecticut School of Medicine, Farmington, CT

The specificity of immunogenicity of tumor-derived HSP preparations has been attributed to peptides chaperoned by HSPs. The following developments are to be discussed in this regard :

- A large number of peptides associated naturally with hsp70 have recently been isolated and sequenced (1).
 - A large number of peptides associated naturally with gp96 have also been isolated and sequenced (2, unpublished, and to be presented at the meeting). Evidence of peptide chaperoning by an HSP in a prokaryotic system shall be presented (3).
 - The peptide-binding domain of hsp70 has been long characterized (4), and a similar domain for gp96 has recently been characterized (5).
 - The idea that the immunogenicity of tumor-derived gp96 preparations is non-specific, has been raised recently (6). This idea has been refuted by several lines of evidence including #3 above.
 - The uptake of gp96 (and other HSPs) has been shown to be mediated through CD91 molecule on the APCs (7, 8). Evidence against this observation was recently published (9). The lacunae in that evidence have been pointed out and published recently (10).
 - The role of CD91 and LOX1 in presentation of gp96-chaperoned peptides by MHC II shall be presented (11).
 - Data regarding an essential physiological role of HSP-peptide complexes in cross-priming shall be discussed (12, 13).
 - Clinical data on the use of gp96-peptide complexes for immunotherapy of human cancer shall be presented.
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2. Liu *et al*. Structural analysis of gp96-associated peptides: consequences for immunogenicity. Manuscript in preparation.
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