

**P002** The adjuvanticity of HSP70: Dissection of *in vivo* and *in vitro* activity  
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The intracellular role of heat-shock proteins (HSPs) in the assembly and disassembly of proteins is well recognised. HSPs have also been implicated in the stimulation of innate and adaptive immune responses. HSPs released from dying cells may provide a 'danger signal', stimulating antigen presenting cells (APCs). Additionally, they bind antigenic peptides delivering them to the MHC class I antigen presentation pathway, thereby facilitating the cross-presentation of antigen to naïve CD8<sup>+</sup> T cells. In the current study, we have characterised the immunological functions of mammalian- and bacterial-derived HSP70 family members. Using fluorescence anisotropy we determined the dissociation constant (Kd) for the binding of antigenic peptides to HSP70. Following equilibrium dialysis, mice were immunised with HSP70/peptide complexes. The kinetics of T cell priming were determined using an *in vivo* assay for CD8<sup>+</sup>T cell mediated cytotoxicity. Intradermal immunisation with HSP70/peptide complexes led to efficient cross-presentation and priming of antigen specific CD8<sup>+</sup> T cells. However, *in vitro* experiments using identical, HSP70 preparations were unable to activate splenic- and bone marrow-derived immature dendritic cells (DCs). Our data suggest that HSP70 may be unable to activate DC populations *in vitro*, but may 'licence' them to induce cytotoxic T cell responses *in vivo*.