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Enhancing the immunogenicity of cancer vaccines using adjuvants and unconventional delivery methods

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The main purpose of cancer immunotherapy is overcoming the immunosuppression in the tumor microenvironment so that the immune cells can effectively identify and eliminate the tumorigenic cells without causing intolerable side effects. The low immunogenicity of tumor-associated antigens (TAAs) presents a major challenge to successful cancer immunotherapy. Vaccine adjuvants are utilized in order to induce potent immune responses against weakly immunogenic TAAs. Various adjuvants like aluminum hydroxide (alum) and squalene-based adjuvants are widely used, safe, efficacious, and are known to induce balanced Th1/Th2 responses; however, their mechanism of action is poorly understood. In this study, we report nanoparticulate and microneedle based approaches to deliver these adjuvants along with cancer vaccines. We examined the benefits of administering cancer vaccine along with adjuvants using novel *in-vitro* methods.

Friday, February 9, 2018
12:00 - 12:50 p.m.
Harvey Ingham 134