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Allergy Therapeutics publishes new research illustrating Group's adjuvant systems portfolio

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The induction of strong T-cell responses, in particular cytotoxic T-cells, is key for the generation of an efficacious therapeutic cancer vaccine.



Allergy Therapeutics, the fully integrated commercial biotechnology company specialising in allergy vaccines has announced through its adjuvant research division Bencard Adjuvant Systems, the publication of new research into the Group's adjuvant system Microcrystalline Tyrosine (MCT) combined with Virus-Like particles (VLPs).

The research, Vaccination with nanoparticles combined with micro-adjuvants protects against cancer (Mohsen M et al.), undertaken by the Group's adjuvant research division, Bencard Adjuvant Systems and published in the Journal for ImmunoTherapy of Cancer, investigated the protective efficacy of the Group's adjuvant system against cancer and showed that the combination of MCT and VLPs caused tumour regression in an aggressive melanoma mouse model and initiated a highly protective CD8 T-cell immune response.

Manuel Llobet, Chief Executive Officer of Allergy Therapeutics, said: "Our strategy for growth with our adjuvant division, Bencard Adjuvant Systems, focuses on extending the use of MCT and VLPs in developing vaccines for unmet needs and disease areas beyond allergy that require an effective depot adjuvant. This ground-breaking work, completed in collaboration with the Jenner Institute at the University of Oxford, supports this strategy and complements the existing work illustrating the potential of our adjuvant systems in disease areas such as influenza and malaria."

About the study: Microcrystalline Tyrosine and Virus-Like Particles in treating cancer
The paper was published in conjunction with collaborators from the Jenner Institute, Oxford, UK and University of Bern, Switzerland and describes how the depot effect of MCT allows release of VLP-antigen to reach lymphoid organs efficiently (<72hrs) for optimal priming of T-cells.

The induction of strong T-cell responses, in particular cytotoxic T-cells, is key for the generation of an efficacious therapeutic cancer vaccine. The study showed that VLPs rapidly drain into the lymphatic system due to their nano-size. However, formulating the nanoparticles with the micron-sized MCT adjuvant resulted in a local depot for the nanoparticles and a longer exposure time for the immune system. In doing so, the MCT:VLP was similarly potent to other commonly used adjuvants such as the potent B type immunostimulatory CpGs and performed better than Alum in inducing cytotoxic T lymphocytes and tumour protection.

MCT has been used in the clinic for decades in allergen-specific desensitisation. The potential shown in this study may therefore readily translate into a clinical setting to optimise the induction of cytotoxic T-cells in humans to drive protection against melanoma.