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May, 2022

NOF EXHIBITS AND PRESENTS AT RNA Therapeutics & Delivery US: In-Person 2022 (June 13-14)

NOF CORPORATION is exhibiting and presenting at RNA Therapeutics & Delivery US: In-Person, held at Courtyard by Marriott Boston Downtown, Boston, MA between June 13th and June 14th (Booth #7).

Conference website: https://www.oxfordglobal.co.uk/rna-therapeutics/

Presentation Title:
Self-Adjuvanting Lipid Nanoparticle mRNA Vaccine for Solid Tumor Immunotherapy

Date and Time:
June 14, 2022 at 12:10-12:40 pm

Abstract:
Nucleic acid vaccines, DNA and messenger RNA (mRNA), have emerged as promising modalities for infectious disease and for cancer immunotherapy due, in part, to shortened manufacturing cycles and high potency. Currently, there is limited understanding of the mechanisms of antigen presentation and induction of specific T-Cell responses critical to long-term immunity. Lipid nanoparticles (LNP) composed of ionizable lipids are important components of such vaccines as they can convey and present the nucleic acid effectively to the immune system. Further improvements in LNP carriers require a reduction in the 1) systemic toxicity, 2) improved endosomal escape, 3) potent and T-cell specific adjuvanting function and 4) targeting to specific antigen presenting cells.
Previously we have reported that lipid nanoparticles composed of COATSOME® SS Series can deliver pDNA or mRNA in mice to liver, solid tumors, and other organs via the IV route and achieve high levels of expression. We also evaluated the safety of the lipids in mice where doses of up to 175 mg/kg were well tolerated.
After subcutaneous administration, the LNPs containing an SS-EC, COATSOME® SS Series with vitamin E scaffolds, elicited a higher gene expression activity in comparison with the other LNPs composed of the SS lipids with different hydrophobic scaffolds. Immunization with the SS-EC-LNPs encapsulating mRNA that encodes ovalbumin (OVA, a model antigen) induced both humoral and CTL responses. These findings suggest LNP composed of SS-EC lipid can be effective delivery systems for mRNA vaccines.

Visit our booth #7 during the conference, or contact our regional offices below:

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