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March, 2023

NOF EXHIBITS AND PRESENTS AT World Vaccine Congress Washington 2023 (April 4-6)

NOF CORPORATION is exhibiting and presenting at World Vaccine Congress Washington 2023, held at Walter E. Washington Convention Center, Washington, D.C. from April 4 to 6 (Booth#918).

Conference website:

<https://www.terrapinn.com/conference/world-vaccine-congress-washington/>

Presentation Title:

COATSOME® SS Series: Biodegradable Lipid Nanoparticles for mRNA Vaccines with Room Temperature Stability

Date and Time:

April 5, 2023 at 3:10pm – 3:25pm (Track: Cancer & Immunotherapy)

Abstract:

Ionizable Lipids are a key component to many mRNA vaccines. There is increasing evidence these lipids play an important role in modulating the immunogenicity of the mRNA molecule. Certain adverse effects of COVID vaccines for example, may be attributed to broad cytokine induction attributed to the use of ionizable lipids. Understanding the role of key cellular mediators such as the NLRP3 inflammasome in this interaction will be key to developing novel mRNA vaccines with tailored immunogenicity and improved adverse reaction profiles.

Here, we describe a novel ionizable lipid series, COATSOME® SS Series, whose immune responses can be modulated by altering the lipid chemistry and the LNP composition. The tolerability and gene delivery efficiency was improved by engineering the lipids for greater intracellular hydrolysis and clearance. We also investigated the in vivo mechanisms responsible for cytokine induction and developed novel lipids for better targeted immune responses that resulted in improved antibody production and cytotoxic T-cell activity. Leveraging these insights, we developed mRNA vaccines for infectious diseases and tumor immunotherapy. The presentation will also cover the development of distinct lipids for cell therapy, gene editing, and vaccines. Optimization of the drug product form lead to the discovery of a lyophilized LNP product with room temperature stability that avoids the cold-chain limitation of previous mRNA vaccines.

Visit our booth #918 during the conference, or contact our regional offices below:

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