NOF CORPORATION

LIFE SCIENCE DIVISION
YEBISU GARDEN PLACE TOWER
20-3, EBISU 4-CHOME, SHIBUYA-KU, TOKYO 150-6012 JAPAN
TEL.+81-3-5424-6741 FAX. +81-3-5424-5348

May, 2024

NOF to Participate in ISCT 2024 from May 29 - 31

NOF CORPORATION is pleased to announce its participation in the upcoming **International Society for Cell & Gene Therapy Annual Meeting 2024** (ISCT 2024), which will be held at Vancouver Convention Centre, West Building, Vancouver, Canada from May 28th to June 1st.

The Conference website: https://www.isctglobal.org/isct2024

As part of the event, NOF CORPORATION will showcase its products for at Drug Delivery System at **Booth #410** from **May 29th to 31st**.

Additionally, Syed Reza, Drug Delivery Consultant at NOF CORPORATION, will give a poster presentation on the following topic on **May 29th** in POSTER NETWORKING RECEPTION 1.

Poster Presentation

Title
High-Yield Primary T Cell Transfection with Biodegradable Lipid Nanoparticles

Date & Time
May 29th / 19:00 – 20:30 PDT

Poster ID / Session
#992 / IMMUNOTHERAPY - POSTER NETWORKING RECEPTION 1

Speaker
Syed Reza, *Drug Delivery Consultant at NOF CORPORATION*

Abstract

Effective gene-delivery systems for primary human T cell engineering are useful tools for both basic research and clinical immunotherapy applications. Pseudovirus-based systems and electro-transfection are the most popular strategies for genetic material transduction. Compared with viral-particle-mediated approaches, electro-transfection is safer, with a faster process time, and lower cost. However, this method is associated with low cell yields and is laborious due to multiple handling steps. Lipid nanoparticles (LNP) have emerged as a highly effective tool for nucleic acid delivery *in vivo*, yet have been difficult to demonstrate delivery to primary T-cells. Here we demonstrate the development of a novel LNP composed of biodegradable COATSOME® SS-Series that provide high level of gene transfection into human primary T-cells ex-vivo with a rapid single step transfection protocol. Compared to electroporation, the expression of an mRNA luciferase reporter was 13 fold higher in CD3+ activated human primary T-cells. The COATSOME® SS-Series were also evaluated *in vivo* with single doses up to 124 mg/kg being well tolerated in mice.
We also describe efforts to lower the cellular toxicity of ionizable lipids through improvements in biodegradable characteristics. Additional improvements in the design were undertaken to reduce the immunogenicity of ionizable lipids. Together these approaches can enable the accelerated development and manufacturing of cell therapies.

NOF CORPORATION invites attendees to visit booth #410 to explore our innovative drug delivery solutions and engage with their experts.

For further information or to arrange a meeting, please refer to the following contact information.

[Americas]
NOF AMERICA CORPORATION
E-mail info@nofamerica.com
Tel +1-914-681-9790 (New York Office)
+1-650-993-7375 (San Francisco Office)
+1-914-704-7903 (Boston Office)

[Europe]
NOF EUROPE GmbH
E-mail info-eu@nofeurope.com
Tel +49-69-7706-100-0

[Asia Pacific, Japan]
NOF CORPORATION
Life Science Division
E-mail ddsinfo@nof.co.jp
Tel +81-3-5424-6741

[China]
NOF (Shanghai) Co. Ltd.
Tel +86-21-6210-1100