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Ensysce Biosciences Inc. Demonstrates Carbon Nanotube Delivery of RNA to PBMCs

HOUSTON--(BUSINESS WIRE)-- Ensysce Biosciences Inc. efforts in the development of the single walled carbon nanotube (SWCNT) delivery platform for therapeutic applications has led to the important finding that SWCNT can transfect peripheral blood mononuclear cells (PBMCs) following intravenous administration. Ensysce has data demonstrating that SWCNT form stable complexes with oligonucleotide payloads, including full length RNA and plasmid DNA. These SWCNT complexes facilitate the delivery of large biologically active agents through natural barriers within the body, and readily into PBMC. Ensysce has also shown the complexes can be formulated to control relative tissue distribution following intravenous administration.

Oligonucleotide delivery especially to PBMCs has been a focus of intense research for years and as seen with the CART therapy is currently limited to in vitro methods using viral vectors or mechanical electroporation. The ability of SWCNT to enable in vivo transfection of PBMCs would be a significant accomplishment for this field which may lead to novel therapeutic approaches for the CART and crisper technologies.

About Ensysce Biosciences:

Ensysce has an extensive carbon nanotube-related, worldwide intellectual property portfolio, including IP developed at Rice University by the late Nobel Prize winner Dr Richard Smalley as well as from the University of Florida and Trinity College in Dublin. Ensysce was recently issued a US patent to extend its intellectual property coverage for the use of SWCNT for therapeutic applications.

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