



UNIVERSITÀ
DI TRENTO

Dipartimento di
Biologia Cellulare, Computazionale e Integrata - CIBIO

EWIA SNAAR-JAGALSKA

LEIDEN UNIVERSITY, THE NETHERLANDS

24 FEBRUARY

2 P.M.

ROOM A208 - POVO 1



PEPTIDE-MODIFIED LIPID NANOPARTICLES BOOST THE ANTITUMOR EFFICACY OF RNA THERAPEUTICS

This study describes **CD44-targeted, peptide-modified lipid nanoparticles** based on the **FDA-approved MC3 formulation** to improve tumor-specific RNA delivery. These nanoparticles enable **efficient delivery of siRNAs and CRISPR/Cas9**, leading to effective gene silencing or editing and significant tumor growth inhibition in breast, prostate, and melanoma cancer models *in vitro* and *in vivo*. Overall, the platform enhances the precision and **therapeutic efficacy of RNA-based cancer treatments**.