



UNIVERSITÀ
DI TRENTO

Dipartimento di
Biologia Cellulare, Computazionale e Integrata - CIBIO

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2 P.M.

ROOM A208 - POVO 1

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● ● 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**.