

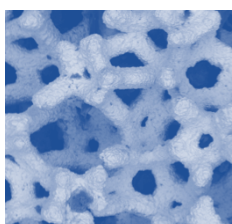
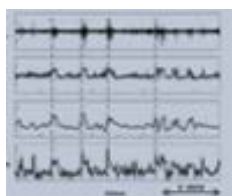
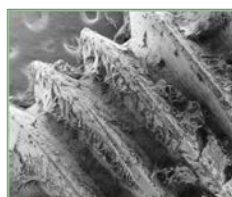
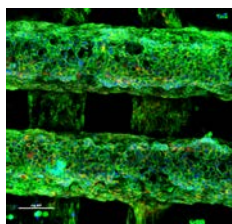


UNIVERSITÀ
DI TRENTO
Department of
Industrial Engineering

BIOftech
BIOfecn
Biomedical Technologies

Seminars Series

2020-2021



MSCA-RISE 2019 GA 778078

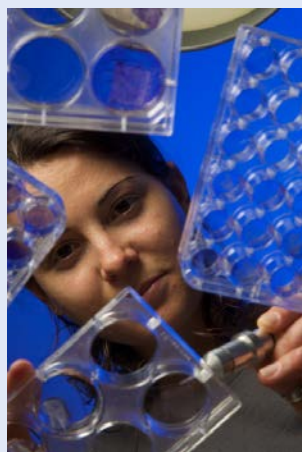
Board:

Antonella Motta
Claudio Migliaresi
Devid Maniglio

Secretariat:

Luca Penasa
Luca.penasa.s@unitn.it

Formulation of nanoparticles for the selective delivery of nucleic acids to cancer cells



Speaker: dr Annalisa Tirella
University of Manchester

Chair: Prof. Antonella Motta

July 7 2021 2.00-3.00 pm CET
Zoom Platform

Abstract

The selective delivery of small nucleic acid sequences in target cells using nanoparticles has been proven challenging. Nanoparticles can be engineered and formulated to enhance target-ligand interactions and internalization, and promote intracellular release to effectively address the clinical need.

This talk will focus on a strategy to optimise nanoparticles design to deliver small nucleic acid sequences to cancer cells. Polycations varying in physicochemical properties were complexed with small nucleic acid sequences, and then coated with hyaluronic acid to exploit the interaction with CD44-expressing cancer cells. Nanoparticles characterisation and use of in vitro models to prove targeting and silencing will be presented in the talk, discussing design criteria and properties of nanoparticles selected for further in vivo studies.