

PNRR Missione 4, Componente 2, Investimento 1.4 “Potenziamento strutture di ricerca e creazione di "campioni nazionali di R&S" su alcune Key Enabling Technologies”
Iniziativa finanziata dall'Unione europea — NextGenerationEU.

National Center for Gene Therapy and Drugs based on RNA Technology
Sviluppo di terapia genica e farmaci con tecnologia a RNA

Codice progetto MUR: **CN00000041** – CUP UNINA: **E63C22000940007**

Doctorate of National Interest
RNA THERAPEUTICS AND GENE THERAPY

TITLE OF THE RESEARCH PROJECT

Polymeric micro needles for RNA delivery

SELECT ONE OF THE FOLLOWING RESEARCH AREA:

- ☐ Mechanisms of Diseases and Drug Target Identification
- ☒ Design and Delivery of New Gene Therapy and RNA-Based Medicines
- ☐ Validation and Safety In Preclinical and Clinical Studies

LOCATION OF THE RESEARCH ACTIVITY (INSTITUTION/DEPARTMENT):

Istituto Italiano di Tecnologia, Centre for Convergent Technologies (CCT), Genova

TUTOR:

Prof. Paolo A. Netti

PROPOSED RESEARCH ACTIVITIES (max 300 words):

The project will focus on:

- A) assessment and quantitative evaluation of the stability and efficacy of nucleic acid MN formulation compared to that of the parenteral formulation by using in vitro assay developed within the same project. Different polymers and drug encapsulation strategies will be operated to maximizing the stability of nucleic acid.
- B) the development of large-scale array of MN to enhance the loading capability of the current configuration of the device.