

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
RNA sequestration in Protein Aggregates

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 Human Technologies (CHT), Genova

TUTOR:

Prof. Gian G. Tartaglia

PROPOSED RESEARCH ACTIVITIES (max 300 words):

Our recent studies (PMID: 37870427) have delved into the intricate relationship between RNA and the aggregation of alpha-synuclein, a key protein implicated in Parkinson's disease. This research highlights how RNA not only accelerates alpha-synuclein aggregation but also becomes sequestered, contributing to cellular toxicity and neurodegeneration seen in Parkinson's disease. The project will focus on:

- Work on protein and RNA aggregation.
- Conduct sequencing and biochemical experiments to validate interactions.
- Determine properties in test tube or cell line models.