

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

Generation of conditional transgenic mouse models to define the role of several genes *in vivo*

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):

University of Bari Aldo Moro, DIMEPRE-J (Department of Precision and regenerative medicine and Ionian area), Nephrology Unit

TUTOR: Prof. Paola Pontrelli, Prof. Loreto Gesualdo

PROPOSED RESEARCH ACTIVITIES (max 300 words):

The PhD student will carry out scientific research activities focused on the generation of conditional transgenic mouse models to provide a powerful experimental approach to define the role of several genes *in vivo*. In particular, the research activity will aim to develop transgenic mice carrying the UBE2V1 gene under the transcriptional control of a constitutive promoter in order to establish the role of Ube2V1 in physiological conditions or in pathological conditions associated with diabetes and diabetic kidney disease. Moreover, the research project aim to generate diabetic mice models to test efficacy and safety of nanoparticles-mediated delivery of specific siRNA and miRNA mimic.