



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

DIPARTIMENTO
DI FARMACIA
E BIOTECNOLOGIE

AVVISO DI SEMINARIO

Il giorno **24 marzo 2026**
alle ore **15.00**

Dr. Gianluca Petris

Ricercatore, Dipartimento di Medicina, Università degli Studi di Udine
(ospite del Prof. G. Capranico)

terrà un seminario in lingua inglese dal titolo:

From gene editing to genome synthesis: the growing ambitions of genome engineering

in presenza:

Aula FARBIOMOT, via Selmi 3, Bologna

e in streaming:

<https://teams.microsoft.com/l/meetup-join/19%3aN09c0NlyEssBnF7ObCyDOQwkgDWM1qdd9f7F2nJV9fw1%40thread.tacv2/1631519544944?context=%7b%22id%22%3a%22e99647dc-1b08-454a-bf8c-699181b389ab%22%2c%22oid%22%3a%225a941351-ef41-4aa4-8771-fa50a6d62ca1%22%7d>

L'evento è organizzato nell'ambito del Corso di Dottorato in Biologia
Cellulare e Molecolare

ABSTRACT

In the last decade, the CRISPR revolution has transformed our ability to investigate, modify and understand genes, leading to develop therapeutic treatments for several diseases. However, the ambitions of genome engineering are growing beyond gene editing. The emerging field of genome synthesis aims to build and control entire genomes across the whole tree of life, holding the potential to revolutionize fields like medicine, agriculture, and environmental sustainability. This talk will explore the evolution of genome engineering, from the gene editing advancements to the large-scale approaches and revolutionary applications of genome synthesis.

BIOGRAPHICAL SKETCH

Gianluca Petris obtained his degree in Medical Biotechnology from the University of Trieste and completed a PhD in Life and Biomolecular Sciences, awarded by The Open University (UK), with research conducted at the International Centre for Genetic Engineering and Biotechnology (ICGEB) in Trieste. His doctoral work focused on the molecular mechanisms of protein folding and degradation. He then joined the CIBIO Department at the University of Trento, where he developed genome editing technologies and applied them to gene therapy. In 2019, with the support of a Marie Skłodowska-Curie Fellowship, he moved to the Medical Research Council Laboratory of Molecular Biology (MRC-LMB) in Cambridge (UK), where he engineered new tools for genome synthesis and genetic code expansion. He later became Principal Scientist at the Wellcome Sanger Institute, focusing on genome engineering approaches for generative genomics and synthetic biology. In 2024, Dr. Petris returned to Italy to establish the Genome Engineering & Biotechnology Unit at the Fondazione Italiana Fegato ONLUS and the Department of Medicine, University of Udine, where his research focuses on synthetic biology and genome engineering for cancer biology and translational medicine.