CRISPR/CAS SYSTEMS: FROM PHAGE DEFENSE TO GENOME EDITING

A SEMINAR OF THE CRISPRES—REE LABORATORY BY MATTEO CICIANI

WHEN
24th of June 2024—3.30 pm

WHERE
Room C05
In streaming here

ABSTRACT
Cas9, a versatile genome editing tool derived from bacterial CRISPR-Cas systems, has revolutionized molecular biology and biotechnology. Its ability to precisely target and modify specific sequences within genomes has enabled a wide range of applications, including therapeutic interventions, disease modeling and agricultural improvements. Despite its widespread use, challenges such as off-target effects and delivery methods remain areas of active research and optimization. To address this, we are exploring metagenomic data, particularly the human microbiome, leveraging the rich diversity of Cas9 orthologs present in natural reservoirs to discover new variants capable of surpassing existing limitations and expanding the genome editing toolbox .

WHAT IS THIS?
This is a seminar organized by the CRISPRES lab, part of the REE initiative at DISAA.

CRISPRES

WHO'S MATTEO CICIANI
Matteo Ciciani is a PhD student at the Laboratory of Computational Metagenomics and the Laboratory of Molecular Virology at the University of Trento. He earned his Bachelor in Molecular Biology from the University of Padova and his Master in Quantitative and Computational Biology from the University of Trento. His primary research interests lie in the bioinformatic analysis of CRISPR/Cas systems within the human microbiome and the development of improved genome editing tools.

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