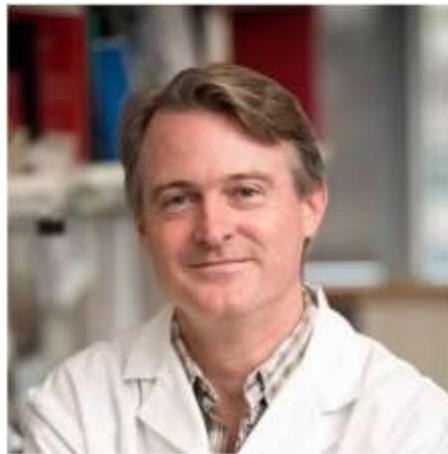




## AVVISO DI SEMINARIO

### “Towards non-coding RNA therapeutics”



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**Giovedì 10 ottobre 2024 ore 15:00**

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Aula 23 Facoltà di Medicina e Psicologia  
[Via Giorgio Nicola Papanicolau](#) Roma



**Abstract:** LncRNAs and microRNAs are non-coding RNAs that regulate gene expression to control important aspects of development and metabolism such as cell differentiation, apoptosis and lifespan. Thousands of ncRNAs are transcribed from the human genome and many are known to be altered in human disease, yet their functions are largely unknown. This lecture will introduce the ncRNAs, discuss their potential roles and functions and methods for studying and targeting these RNAs as new therapies for disease.

We will focus on a few microRNAs, e.g. miR-21, miR-155, let-7 and miR-34 which are implicated in human cancer. Specifically, human let-7 and miR-34 are poorly expressed or deleted in different cancers such as breast (TNBC) and lymphoma (DLBCL), and over-expression of let-7 or miR-34 in cancer cells inhibits their growth, demonstrating a role for these miRNAs as tumor suppressors in human tissue. let-7 and miR-34 regulate the expression of important oncogenes and immune checkpoint genes implicated in multiple cancers, suggesting a mechanism for their involvement in cancer. We will focus on the role of these genes in regulating proto-oncogene expression during development and cancer, and on using mimics to these miRNAs to suppress tumorigenesis. In contrast, miR-21 and miR-155 are oncomiRs and up-regulated in many cancer types. We will also discuss developing effective strategies to target these miRNAs as a novel anti-cancer approach.

In this lecture you will learn about:

Properties and functions of ncRNAs such as microRNAs

Roles for ncRNAs and microRNAs in cancer

Methods for detecting, studying and targeting microRNAs as cancer therapy

