GHUCCTS KL2 Visiting Scholars Seminar Series

"Emerging Roles of microRNAs in Cancer"

Tuesday, May 18, 2021
12PM - 1 PM

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GHUCCTS
Georgetown-Howard Universities
Center for Clinical and Translational Science

KEYNOTE SPEAKER
Mario Acunzo, PhD

Dr. Mario Acunzo, MS Ph.D., graduated in 2008 with a Ph.D. in Medical Genetics and Molecular Medicine at the School of Medicine of the Federico II University in Naples (Italy). Dr. Acunzo moved then to the Ohio State University (OSU). Under the guidance of one most productive geneticists in the world, Dr. Carlo Croce, he focused his research career on the study of non-coding RNAs (ncRNAs) in lung cancer. After several years at OSU, Dr. Acunzo relocated in 2017 to the Virginia Commonwealth University (VCU) in the Division of Pulmonary Diseases and Critical Care Medicine at Assistant Professor's rank.

ABSTRACT

The role of RNA (A to I) editing in Lung Cancer. microRNA Adenosine-to-Inosine A to I editing modifications result dysregulated in Lung Cancer, and it can cause changes in microRNAs function and expression. Thanks to bioinformatic analysis of small RNA Next Generation Sequencing (NGS) data, we progressively uncovering the meaning of microRNA A to I editing in Lung Cancer while also investigating the microRNA editing phenomenon as possible biomarkers of lung cancer progression.

Design of artificial microRNA as therapeutics in Lung Cancer. There are several genetic mutations responsible for lung cancer phenotype. While some of these mutations are targetable using specific drugs, some others still result "Untargettable" like mutated KRAS. We have recently developed a method for specifically target point-mutated KRAS mRNA in Lung Cancer using artificial microRNAs. This method reduces the off-targeting effects sparing the wild-type KRAS mRNA targeting. Another goal of this project is to design artificial microRNA for targeting multiple selected targets for knocking down some crucial pathways in Lung Cancer.

QUESTIONS? Contact
Rebecca Ho
rh1010@georgetown.edu

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