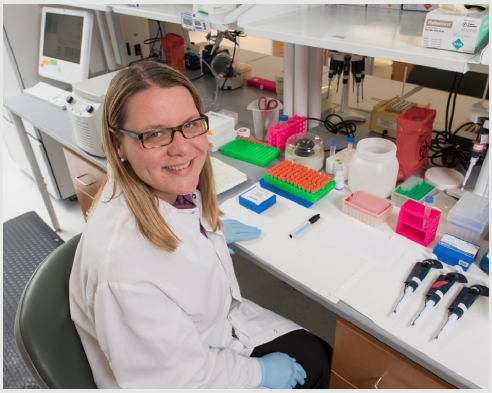
BIOENGINEERING
Fall 2020 Seminar

Date: **Thursday, October 22**
Time: **12:00 pm - 1:00pm**
Location: **Virtual**
Join Zoom Meeting—https://gmu.zoom.us/j/92554249038?pwd=V2p1ZUdqM1Y2RnBCcWhDU0V0T2FZZz09

Meeting ID: 925 5424 9038 Passcode: 640851



Mariaelena Pierobon, MD

Biography: Dr. Pierobon is an Associate Professor at the School of System Biology and Center for Applied Proteomics and Molecular Medicine (CAPMM) at George Mason University. Dr. Pierobon received her Medical Degree from the University of Padova, Italy, and a Master's in Public Health from George Mason University. In 2019, she served a U.S. Fulbright Scholar to Italy. In her work, Dr. Pierobon utilizes high-throughput technologies to explore functional signaling networks in cancer onset and response to treatment. She has participated in the design and implementation of precision medicine clinical trials for metastatic breast, pancreatic, and colorectal cancers where "multi-Omic" molecular information is used for selecting tailored treatments for cancer patients. Dr. Pierobon's work has yielded more than 50 peer-review publications and presentations at national and international meetings.

Title: Advancing precision medicine using "Omics"-based approaches.

Abstract: Molecular profiling has led to a paradigm shift in the understanding of the biological mechanisms associated with cancer biology and disease management. Biomarker-defined molecular profiles are becoming an integral part of the therapeutic decision-making process and have transformed cancer therapy from a one-size-fits-all approach to customized treatments which provide personalized solutions for each patient. While genomic-based profiling has led the field of precision oncology, this approach allows to identify tailored treatments for a small to moderate proportion of cancer patients. This presentation will cover: a. our experience with omics technologies for implementing clinical outcome of cancer patients in a multi-institutional setting; b. the role of molecular profiling for off-label use of FDA-approved compounds; c. the need for developing novel tools able to capture tumor-immune interactions and their role in precision medicine and treatment.