DIPARTIMENTO DI FARMACIA E BIOTECNOLOGIE

AVVISO DI SEMINARIO

Il giorno **6 maggio 2022**
alle ore **11.00**

in streaming:

https://teams.microsoft.com/l/meetup-join/19%3aN09c0NIyEssBnF7ObCyDOQwkgDWm1qdd9f7F2nJV9fw1%40thread.tacv2/1631519544944?context=%7b%22Tid%22%3a%22e99647dc-1b08-454a-bf8c-699181b389ab%22%2c%22Oid%22%3a%225a941351-ef41-4aa4-8771-fa50a6d62ca1%22%7d

oppure *in presenza*:

Aula 1, FaBiT, via Belmeloro 6, Bologna (green pass richiesto)

Prof. Andrea Morandi, Ph.D.

Department of Experimental and Clinical Biomedical Sciences, University of Florence, Florence, Italy

(moderatori Dr. Andrea Arleo e Federico D'Agostino
Dottorato in Biologia Cellulare e Molecolare)

terrà un seminario dal titolo:

METABOLIC DEREGULATION AND REPROGRAMMING IN THERAPY RESISTANT BREAST CANCER

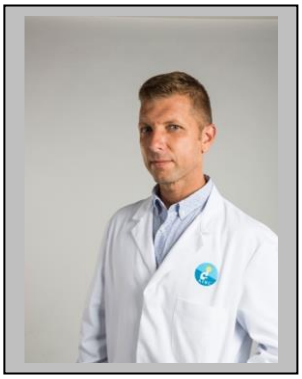
Colleghi e studenti sono cordialmente invitati

Commissione Ricerca e Attività Correlate - FaBiT

ABSTRACT

The majority of breast tumours express oestrogen receptor (ER) and are oestrogen-dependent. Endocrine therapies that block ER signalling are the standard of care for these breast cancers. However, resistance still limits their clinical benefit and investigating the mechanisms that drive endocrine therapy resistance is crucial for identifying the patients most likely to respond to therapy, and developing innovative targeting strategies. Moreover, endocrine therapy is now complemented with innovative targeted agents, at least in the metastatic setting. We have used an array of multidisciplinary techniques, including Seahorse metabolic profiling coupled with mass spectrometry, genome wide profiling, experimental in vivo models, patient-derived xenografts and patient samples analysis and found that metabolic pathways are altered in endocrine therapy resistance. Particularly, we found amino acid and lipid metabolic nodes differentially expressed in the resistant breast cancers. The metabolic reprogramming is not merely a bystander effect of resistance acquisition and impairing key players involved in amino acid and lipid metabolism resensitise resistant cancer cells to endocrine agents. Characterising the mechanistic link between metabolic reprogramming and endocrine therapy response will offer a series of novel potential predictive biomarkers and/or therapeutic targets and address an important clinical issue in resistant ER+ breast cancer.

BIOGRAPHICAL SKETCH



Andrea Morandi is Associate Professor of Biochemistry at the University of Florence. He studied Biotechnology (BSc) and Medical Biotechnology (MSc) at the University of Florence and gained his BSc in 2004 and MSc in 2006 both with honours. Andrea joined the Department of Pathology in Florence to start a PhD on the role of Tyrosine Kinase Receptors in breast cancer. In 2007, he moved to the Institute of Cancer Research in London in the laboratory of Prof Clare Isacke where he investigated the role of RET in response and resistance to endocrine therapy in breast cancer. In 2013, he was awarded a Fondazione Italiana per la Ricerca sul Cancro Fellowship and returned to Florence. He then obtained the Fondazione Umberto Veronesi fellowship for three consecutive calls before becoming Assistant Professor in Biochemistry in 2018 and Associate Professor in 2021. Andrea now leads the Tumour Biochemistry Laboratory at the University of Florence and his research is focused on understanding the molecular and metabolic pathways that influence tumour progression, with a particular focus on response and resistance to therapy, to identify innovative predictive markers or potential therapeutic targets.