# Seminar series TRR 305 – Striking a moving target: From mechanisms of metastatic organ colonisation to novel systemic therapies

**Wednesday, 13 April 2022**
**15.00 h**
**Online Zoom**


## Dr. Mohamed Bentires-Alj

**Experimental Surgical Oncology**
**Tumor Heterogeneity, Metastasis and Resistance**
**University of Basel / University Hospital Basel**


## Cancer cell-intrinsic and extrinsic mechanisms of metastatic colonization

Each year over 2.1 million new cases of breast cancer occur among women worldwide and 600,000 women die from this disease. In most cases, metastasis is the cause of death. Indeed, while 98% of patients survive 5 years or more after being diagnosed with a localized (confined to the primary site) breast cancer, this number drops to 15-25% if the cancer has metastasized to distant organs. Curing metastatic breast cancer clearly represents an unmet medical need.
Although progress has been made in broadly understanding breast tumor biology and progression to metastases, most of the relevant molecules and pathways remain undefined. The thread connecting the research in my lab is tumor heterogeneity. We assess mechanisms that influence normal and neoplastic breast stem cells, metastasis, and resistance to targeted therapies at the molecular, cellular, and whole organism levels considering both cell autonomous and non-cell autonomous mechanisms. We have also developed a personalized breast cancer treatment program. Results of experiments using mouse models (e.g., transgenic mice, xenografts, patients-derived xenografts (PDX)), patient samples, and a variety of OMICs, cell biological and biochemical assays will be presented.


Obradović MMS, Hamelin B, Manevski N, Couto JP, Sethi A, Coissieux MM, Münst S, Okamoto R, Kohler H, Schmidt A, Bentires-Alj M. Glucocorticoids promote breast cancer metastasis. Nature. 2019 Mar;567(7749):540-544. doi: 10.1038/s41586-019-1019-4. Epub 2019 Mar 13. PMID: 30867597.

Zilli F, Marques Ramos P, Auf der Maur P, Jehanno C, Sethi A, Coissieux MM, Eichlisberger T, Sauteur L, Rouchon A, Bonapace L, Pinto Couto J, Rad R, Jensen MR, Banfi A, Stadler MB, Bentires-Alj M. The NFIB-ERO1A axis promotes breast cancer metastatic colonization of disseminated tumour cells. EMBO Mol Med. 2021 Apr 9;13(4):e13162. doi: 10.15252/emmm.202013162. Epub 2021 Mar 10. PMID: 33751828; PMCID: PMC8033524.


## Zoom-Meeting-Link

https://uni-regensburg.zoom.us/j/65985657719?pwd=R0hlaVdpbkF5MW1yR0IreXFteU5RZz09

Meeting-ID: 659 8565 7719
Code: 474983