

Mohamed Bentires-Alj awarded prestigious European Research Council Grant

[Mohamed Bentires-Alj](#), group leader at the Friedrich Miescher Institute for Biomedical Research in Basel, is one of the recipients of a prestigious [ERC Starting Grant](#) from the European Research Council (ERC). As the ERC President described it: "The ERC Starting Grant is about enabling the very best up-and-coming researchers to launch their independent careers early on."

Mohamed Bentires-Alj receives the grant of approximately 1.6 million Euro to study the role of protein tyrosine phosphatases (PTPs) in breast development and cancer. "Although we have made significant progress setting up a new laboratory, developing innovative methods and generating exciting preliminary data, our work is at the critical stage where additional resources are needed to follow up on our observations. This ERC Starting Grant will support the salaries of a PhD student and a post-doc and will undoubtedly consolidate our existing group", comments Mohamed Bentires-Alj.



Each year, 1.1 million new cases of breast cancer occur among women worldwide and 400,000 women die from the disease. Although progress has been made in understanding breast tumor biology, most of the relevant molecules and pathways remain undefined. Their delineation is critical for a rational approach to breast cancer therapy.

Virtually all cell signaling pathways are modulated by reversible protein tyrosine phosphorylation, an enzymatic reaction in which a phosphate group is added to a protein on a tyrosine. This is catalysed by two classes of enzymes: protein-tyrosine kinases (PTKs) that add the phosphate and PTPs that remove it. Not surprisingly, tyrosine phosphorylation has an important role in breast development and cancer. Whereas the role in breast cancer of specific PTKs, like the HER2 receptor, is well studied, almost nothing is known about the function of specific PTPs in this disease.

Mohamed Bentires-Alj's project not only uses state-of-the-art *ex vivo* and *in vivo* models for studying breast pathophysiology, but also crosses the boundaries between the development and cancer research fields and between basic science and clinical application.

[> ERC media release](#)