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ZNF217, a key regulator of tumorigenesis with powerful biomarker value in ER+ breast cancers

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Newly discovered molecular functions of ZNF217 indicate that it orchestrates complex intracellular circuits as a new key regulator of tumorigenesis. This talk will focus on recent research on ZNF217-driven molecular functions in human breast cancers, revisiting major hallmarks of cancer and highlighting the downstream molecular targets and signaling pathways of ZNF217. Among the ZNF217-driven mechanisms which lead to aggressiveness in breast cancer the ZNF217/ Estrogen receptor alpha (ERα) interplay is one of the mechanisms specifically developed by ZNF217 in the breast cancer luminal context. ZNF217 physically binds to ERα both *in vitro* and *in vivo* and enhances the ligand-dependent driven direct genomic activity of ERα. We also discuss the exciting translational medicine investigating ZNF217 expression levels as a new powerful biomarker in breast cancer. Indeed, ZNF217 expression levels add significant value to the molecular classification of breast cancers especially for the Luminal-A subtype, where ZNF217 expression differentiated between excellent and intermediate/poor Luminal-A relapse-free survivors. ZNF217 expression levels in ER-positive breast tumors are thus informative and provide a novel and powerful biomarker that could aid clinicians in their therapeutic decisions.

Biography

Pascale A Cohen is Professor in Molecular Biology and Biotechnology in University of Lyon, France since 2005. She is also Principal Investigator and manages a team in the CRCL Cancer Research Center of Lyon CRCL UMR INSERM 1052-CNRS 5286, France. She got a degree in Pharmacy (1991), a PhD in Biomedical Sciences (1995, Univ. Montpellier, France). She was Post-doctoral fellow in the Cancer Research Campaign Laboratories, University of Dundee, UK and in Sanofi-Research Company (Montpellier, France), Immuno-Oncology Department (1998-99). Currently, her projects are dedicated to breast cancer research: *in vitro*, *in vivo*, genomics and translational medicine approaches to decipher pharmacologic resistance to anticancer therapies, the deleterious role of the ZNF217 oncogene, the identification of new prognostic or predictive biomarkers, and the impact of environmental factors exposure on tumor progression. She got several honors such as Exceptional Class Professor Distinction and her research work has been awarded by many prizes. She is also committed in several national and international education programs and is frequently requested as external scientific referee for international scientific journals or committees.

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