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Complexity of tumor-stroma interactions and its importance for drug resistance

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Cancer lesions are complex organ-like tissues that are not only composed of a heterogeneous population of cancer cells but also of different types of stromal cells. The tumor stroma is not a bystander, but heavily involved in tumor progression and therapy resistance. Stroma-mediated drug resistance is a new challenge and needs to be considered in therapy decisions. However, we have just begun to understand the mechanisms underlying stroma-mediated drug resistance. The acquisition of such resistance requires the interaction between the tumor cells and the stroma which is supposedly quite complex given the different types of stroma cells and the heterogeneity within the cancer cell population. Hence, the outcome of such interactions in terms of drug resistance may vary depending on the particular cells involved. To address this issue, we are analyzing the effects of different stromal cells on a variety of subtypes of breast cancers and on different sub clones residing in a heterogeneous breast cancer cell population.

Biography

Juergen Dittmer has completed his PhD from University Bremen (Germany) and Postdoctoral studies from the University of Zurich (Switzerland), the National Institutes of Health (USA) and the University of Tubingen (Germany). He is the Head of the research laboratory in the Clinic for Gynecology at the University of Halle (Germany) and is currently Secretary of the EORTC Pathobiology group. He has published more than 50 papers in reputed journals and has been serving as an Editorial Board Member of *BMC Molecular Biology and BMC Research Notes.*

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