P053 Local responses to DNA damage in human cells: focus on chromatin remodeling factors

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To cope with genotoxic stress, cells activate protective mechanisms that signal and repair DNA lesions. Although much progress has been made in understanding the underlying molecular mechanisms at the DNA level, DNA organization with histone proteins into chromatin adds another layer of complexity to the DNA damage response. Integration of the DNA-damage-signaling cascade in a chromatin context implies that factors involved in chromatin dynamics such as histone chaperones, modifying enzymes and remodeling complexes are likely to play also a critical role in response to DNA damage.
Here, we investigate this issue in human cells by using local induction of DNA damage by laser micro-irradiation as a screening approach. Thus, we identify new players in the DNA damage response among factors involved in chromatin dynamics. We will present our recent results with a particular focus on chromatin remodeling factors.