

P052 Cell biological studies of RNA helicase A and WRN helicase

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RNA helicase A (RHA), also named Nuclear DNA helicase II (NDH II) is an ubiquitously expressed helicase able to unwind both RNA and DNA. RHA is implicated in DNA transcription, RNA processing and DNA repair. RHA interacts physically and functionally with the RecQ helicase WRN, and both proteins co-purify over several conventional columns. Here, we tried to elaborate the interaction between WRN and RHA *in vivo* using a cell biological approach. In undisturbed, proliferating U2OS cells RHA localizes mainly into the nucleus whereas WRN is concentrated mainly to the nucleolus. After preextraction, RHA staining was lost from the nucleus except for the nucleolus. γ -irradiation did not yield any co-localisation between RHA and WRN. Instead, treatment with 0,5 μ g/ml actinomycin D causes a dramatic reorganisation of the RHA and WRN staining. WRN was largely lost from the nucleoli, whereas RHA concentrated in sub-nucleolar territories that neighbored residual WRN staining. Despite the lack of obvious colocalisation, RHA and WRN helicase appear to respond in a concerted manner to the transcriptional inhibitor actinomycin D.