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## Regular Wednesday IMG seminar



**doc. Mgr. Lumír Krejčí, Ph.D.**

**Faculty of Medicine, Masaryk University**

**“Homologous Recombination - From Repair of DSBs  
to Processing Stalled Replication Forks  
and Human Diseases”**

Our lab focuses on the mechanisms ensuring accurate DNA replication and the role of homologous recombination (HR) in preventing genome instability. We investigate how endogenous hard-to-replicate regions, G-quadruplexes (G4) and R-loops, impact replication and contribute to disease development. A key aspect involves studying the formation and regulation of RAD51 filaments during HR. We explore how positive regulators like BRCA2 and RAD51 paralogs promote filament assembly and its stability, while negative regulators like RECQ5 and RECQ4 helicase help balance replication stress and genome stability.

**The seminar will be held**

**on Wednesday 20<sup>th</sup> November 2024 at 15:00**

**in the Milan Hašek Auditorium at IMG**

(Institute of Molecular Genetics of the Czech Academy of Sciences, Vídeňská 1083, Prague 4)

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