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MPI-NAT SEMINAR SERIES

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Understanding the mitochondrial DNA replication machinery

Recent evidence directly links mitochondrial metabolism with neurological and neurodegenerative disorders. Mutations in nuclear genes that are crucial for mitochondrial DNA (mtDNA) maintenance can cause severe neurological conditions like ataxia-epilepsy syndromes, Alpers' syndrome, and Perrault syndrome. Moreover, mtDNA structural defects are implicated in Parkinson's and Alzheimer's diseases and cancer progression. The replication of mtDNA, performed by the mitochondrial DNA replisome, is essential to mitochondrial function, yet its mechanism remains largely unexplored. Understanding the mtDNA replication process is critical for deciphering the pathogenesis of related disorders and developing treatments. In this talk, I will summarise our efforts to study this system, focusing on recent discoveries regarding the DNA polymerase gamma.

Thursday, 20.03.2025, 1:00 pm

Host: Kristina Žumer



Faßberg Campus
Seminar Room, Dept. Molecular Biology
Tower 4, 2nd floor

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