**Analysis of the function of the DNA polymerase subunit Pol2 in origin firing and checkpoint activation.**

During DNA duplication, the eukaryotic replisome functionally and physically links the unwinding of the template DNA with the synthesis of the novel strand. In *Saccharomyces cerevisiae, the* latter task is performed by three DNA polymerases, namely Pol α and Pol δ synthesizing the lagging strand, and Pol ε the leading strand. Uniquely among the polymerases, Pol ε is also involved in origin firing and activation of the S-phase checkpoint.

Its catalytic subunit, Pol2, is characterized by an N-terminus that contains exonuclease and polymerase domains, and an essential C-terminus. C-terminal mutants have been shown to have a range of phenotypes, including defects in origin firing, replication, DNA damage repair and checkpoint activation. However, it is unclear if all these defects arise from its origin firing deficiency or whether the C-terminus has a multi-faceted role in the functioning and maintenance of the replisome.

In our study, we observed that expression of the last 236 residues of Pol2 was sufficient to partially suppress the defects in origin firing, fork progression and checkpoint signaling inherent to a truncation mutant, *pol2-11*. Furthermore, we identified conserved residues essential for suppressive effects of the C-terminal fragment, possibly indicating their importance in the basis of this polymerase’s unique versatility. Finally, we observed that, independently of origin firing, a *pol2-11* mutant causes defect in checkpoint maintenance and fork progression.