

“NEW PIECES IN AN OLD PUZZLE - COUPLING NUCLEOSOME ASSEMBLY TO DNA REPLICATION”

by

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Abstract

Successful assembly of nucleosomes following DNA replication, termed DNA replication-coupled (RC) nucleosome assembly, is critically important for both maintaining of genome integrity and retaining of epigenetic information. Thus, DNA replication and nucleosome assembly machinery must function in a highly coordinated fashion to transmit both genetic and epigenetic information. Deposition of newly synthesized histone H3-H4 by histone chaperones is the initial step of DNA replication-coupled (RC) nucleosome assembly. Given that multiple histone chaperones involved in RC nucleosome assembly were identified over the years and considering the methodological challenges that have to date limited the capacity for *in vivo* monitoring of nucleosome assembly, the mechanisms underlying how nucleosome assembly coupled to DNA replication remain elusive. Using budding yeast as the primary model, we study the mechanisms underlying this process. In this talk, I will introduce our recent progress regarding how histone chaperone FACT contributes to RC nucleosome assembly and how multiple histone chaperones targeting to replication fork, and through which coupling nucleosome assembly with DNA replication.

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All are welcome