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## Functional dynamics of human DNA polymerase delta

### Researchers:

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Language Undefined

### Description:

Proyecto asignado a través de la Red Española de Supercomputación ([RES](#) [2]).

Although the basic process of DNA replication is well-known, there are still many questions about the roles of specific components and how is the high fidelity of the replication achieved. One of these components is p12, a protein that binds DNA polymerase delta and regulates its activity. In the present work we aim to understand how p12 modulates the activity of its partner polymerase delta by combining structures from Cryo-EM and enhanced sampling simulations. Our hypothesis is that this small protein is able to control the rate at which polymerase delta changes from active to inactive conformations by binding to a critical region of the polymerase.

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**Source URL:**<https://www.cenits.es/en/proyectos/functional-dynamics-human-dna-polymerase-delta>

### Links

[1] <https://www.csic.es/> [2] <https://www.res.es/>