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Topo II & pol II

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Jonathan B Weitzman

Email: jonathanweitzman@hotmail.com

The core RNA polymerase II (pol II) requires components of the **holoenzyme (holo-pol) complex** to drive transcription from chromatin templates. In the September 27 *Nature*, Neelima Mondal and Jeffrey Parvin from the **Brigham and Women's Hospital**, Boston, USA, report that **DNA topoisomerase II alpha** (topo II) is required for chromatin-dependent coactivation (*Nature* 2001, **413**:435-438). They demonstrated that topo II is a component of the holo-pol complex and conferred the ability to relax supercoiled DNA. Topo II inhibitors, such as etoposide, prevented pol II transcription on chromatin templates. The authors suggest that an additional factor is important for loading topo II onto pre-formed chromatin templates. They propose a model in which topo II is required to relieve superhelical tension generated during transcription by pol II.

References

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