# Article information:

Two independent modes of chromatin organization revealed by cohesin removal - PMC  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5687303/>

# Article summary:

1. Imaging and chromosome conformation capture studies have revealed several layers of chromosome organization, including segregation into megabase-large active and inactive compartments, and partitioning into sub-megabase domains (TADs).

2. Deletion of the cohesin-loading factor Nipbl in mouse liver leads to a dramatic reorganization of chromosomal folding, with TADs and associated peaks vanishing globally.

3. The disappearance of TADs unmasks a finer compartment structure that accurately reflects the underlying epigenetic landscape, demonstrating that two independent mechanisms are at play in 3D genome organization: cohesin-independent segregation and cohesin-dependent formation of TADs.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article is generally reliable in its reporting of the research findings, as it provides detailed descriptions of the experiments conducted as well as clear explanations for the results obtained. The authors also provide evidence for their claims by citing relevant literature throughout the article. However, there are some potential biases present in the article which should be noted. For example, while the authors do mention possible risks associated with deleting Nipbl in mouse liver, they do not explore any counterarguments or alternative perspectives on this issue. Additionally, while they cite relevant literature to support their claims, they do not provide any evidence for their assertions regarding how TADs form or interact with other layers of chromosome organization. Furthermore, there is a lack of discussion regarding potential implications or applications of these findings beyond basic research purposes. In conclusion, while this article is generally reliable in its reporting of research findings, it could benefit from further exploration into potential biases and missing points of consideration.

# Topics for further research:

* Chromosome organization
* TAD formation
* Nipbl deletion risks
* Alternative perspectives on Nipbl deletion
* Implications of research findings
* Applications of research findings

# Report location:

<https://www.fullpicture.app/item/d4e9f0df839fdfe7a8ae859717a67520>