# Article information:

Mammalian PERIOD2 regulates H2A.Z incorporation in chromatin to orchestrate circadian negative feedback | Nature Structural & Molecular Biology
<https://www.nature.com/articles/s41594-022-00777-9>

# Article summary:

1. Mammalian circadian clocks are endogenous, cell-autonomous timing systems that allow organisms to anticipate daily changes in the external environment and adapt their physiological response.

2. The transcriptional repression and subsequent alleviation of the PER–CRY complex leads to oscillatory gene expression of a handful of genes that constitute this core-clock module.

3. PER complexes incorporate H2A.Z to compact chromatin at circadian loci to establish negative feedback, allowing for BMAL1 chromatin recruitment in the subsequent cycle.

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

The article is generally reliable and trustworthy, as it provides a comprehensive overview of the role of mammalian PERIOD2 in regulating H2A.Z incorporation in chromatin to orchestrate circadian negative feedback. The article is well-researched and supported by evidence from previous studies, which are cited throughout the text. Furthermore, the article does not appear to be biased or one-sided; rather, it presents both sides of the argument equally and objectively. Additionally, potential risks associated with this research are noted throughout the text, such as how epigenetic pathways can rhythmically regulate chromatin contacts between promoters and enhancers and between chromosomes, as well as between clock loci and the nuclear lamina.

The only potential issue with this article is that it does not explore any counterarguments or alternative points of view on this topic; however, given that this is an overview article summarizing existing research on this topic rather than a new study proposing a novel hypothesis or theory, this is understandable. All in all, this article appears to be reliable and trustworthy overall.

# Topics for further research:

* Epigenetic regulation of circadian rhythms
* Circadian negative feedback mechanisms
* H2A.Z incorporation in chromatin
* Promoter-enhancer chromatin contacts
* Chromosome-nuclear lamina interactions
* PERIOD2 role in circadian regulation

# Report location:

<https://www.fullpicture.app/item/43e498105e7d8df694719ba7b5aa4c51>