# Article information:

Melatonin alleviates alcoholic liver disease via EGFR–BRG1–TERT axis regulation - PMC
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9939303/>

# Article summary:

1. Melatonin can alleviate alcoholic liver disease (ALD) by reducing liver steatosis, cell death, and inflammation.

2. Telomerase reverse transcriptase (TERT) is a key downstream effector of melatonin in hepatocytes.

3. Melatonin directly regulates the epidermal growth factor receptor (EGFR) on the hepatocyte surface, which affects the BRG1-TERT axis and contributes to ALD alleviation.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

该文章是一篇关于褪黑素对酒精性肝病的治疗作用及其机制的研究。文章通过细胞模型和动物模型实验，发现褪黑素可以减轻酒精诱导的肝细胞损伤，包括降低肝脂肪变性、细胞死亡和炎症等。RNA测序分析和功能失活实验表明，端粒酶逆转录酶（TERT）是褪黑素的一个关键下游效应器。生物物理学实验发现，表皮生长因子受体（EGFR）是肝细胞表面上直接结合和调节褪黑素的靶标。在动物模型中，肝特异性敲除Tert或Egfr会削弱褪黑素介导的肝保护作用，部分通过核布拉马相关基因-1（BRG1）的调节来实现。长期给予健康小鼠MLT（90天）没有明显不良反应。

该文章具有一定的科学价值，但也存在一些问题：

1. 作者未提及是否存在潜在利益冲突或资金来源问题。

2. 文章未探讨其他可能影响结果的因素，如动物模型的选择、实验条件的控制等。

3. 文章未提及褪黑素对其他器官或系统的影响，以及长期使用可能带来的潜在风险。

4. 文章没有平等地呈现双方观点，只强调了褪黑素的治疗作用，而未探讨其他可能的治疗方法或药物。

5. 文章中提到TERT是褪黑素的关键下游效应器，但并未提供足够证据支持这一说法。

# Topics for further research:

* Potential conflicts of interest or funding sources
* Other factors that may affect the results
* such as animal model selection and experimental conditions
* The potential effects of melatonin on other organs or systems
* as well as the potential long-term risks of use
* Other possible treatment methods or drugs that were not explored in the article
* The evidence supporting TERT as a key downstream effector of melatonin
* Limitations or weaknesses of the study design and methodology

# Report location:

<https://www.fullpicture.app/item/e42ee24edc75fffe5c4430bf28e348fe>