# Article information:

Human skin long noncoding RNA WAKMAR1 regulates wound healing by enhancing keratinocyte migration | PNAS
[https://www.pnas.org/doi/abs/10.1073/pnas.1814097116?url\_ver=Z39.88-2003=ori%3Arid%3Acrossref.org=cr\_pub++0pubmed](https://www.pnas.org/doi/abs/10.1073/pnas.1814097116?url_ver=Z39.88-2003&rfr_id=ori%3Arid%3Acrossref.org&rfr_dat=cr_pub++0pubmed)

# Article summary:

1. This study focused on a skin-specific long noncoding RNA (lncRNA) called WAKMAR1, which is down-regulated in wound-edge keratinocytes of human chronic nonhealing wounds compared with normal wounds under reepithelialization.

2. WAKMAR1 was found to be critical for keratinocyte migration and its deficiency was shown to impair wound reepithelialization.

3. Mechanistically, WAKMAR1 interacts with DNA methyltransferases and interferes with the promoter methylation of the E2F1 gene, which is a key transcription factor controlling a network of migratory genes.

# 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:

This article provides an in-depth analysis of the role of long noncoding RNAs (lncRNAs) in skin wound healing, focusing on one particular lncRNA called WAKMAR1. The authors provide evidence that this lncRNA is down-regulated in wound-edge keratinocytes of human chronic nonhealing wounds compared with normal wounds under reepithelialization, and that it is critical for keratinocyte migration and its deficiency impairs wound reepithelialization. The article also provides evidence that WAKMAR1 interacts with DNA methyltransferases and interferes with the promoter methylation of the E2F1 gene, which is a key transcription factor controlling a network of migratory genes.

The article appears to be reliable and trustworthy overall as it provides detailed evidence for its claims and cites relevant sources throughout. It also includes acknowledgements thanking those who provided technical support or clinical sample collection, as well as listing all funding sources used to support the research presented in the article. Furthermore, data availability information is provided at the end of the article so readers can access any additional data they may need to further evaluate the findings presented here.

The only potential bias noted in this article is that it does not present both sides equally; while there are some counterarguments mentioned throughout, they are not explored in depth or given equal weight as those supporting the main argument presented by the authors. Additionally, there are no risks noted in this article; while this may not be necessary for every scientific paper published, it would have been beneficial to include some discussion about potential risks associated with manipulating lncRNAs such as WAKMAR1 when discussing their potential therapeutic applications.

# Topics for further research:

* Long noncoding RNA therapeutic applications
* DNA methyltransferase mechanism
* E2F1 gene regulation
* Keratinocyte migration pathways
* Skin wound healing risks
* Chronic nonhealing wound treatments

# Report location:

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