# Article information:

Mapping responsive genomic elements to heat stress in a maize diversity panel | Genome Biology | Full Text  
<https://genomebiology.biomedcentral.com/articles/10.1186/s13059-022-02807-7>

# Article summary:

1. This article examines the genetic variation in maize plants that allows them to cope with environmental stress, specifically heat stress.

2. The authors analyze the transcriptomes of more than 100 maize inbreds to identify cis- and trans-acting eQTLs that influence the expression response to heat stress.

3. Global footprinting of transcription factor binding is performed in control and heat stress conditions to document regions with heat-enriched transcription factor binding occupancies.

# 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 and trustworthy, as it provides a comprehensive overview of the research conducted on mapping responsive genomic elements to heat stress in a maize diversity panel. The authors provide evidence for their claims by analyzing transcriptomes of more than 100 maize inbreds, identifying cis- and trans-acting eQTLs that influence the expression response to heat stress, and performing global footprinting of transcription factor binding in control and heat stress conditions. Furthermore, they validate their findings by confirming differential heat responses of alleles for selected genes using transient expression assays.

The article does not appear to be biased or one-sided, as it presents both sides of the argument equally and objectively. It also does not contain any promotional content or partiality towards any particular viewpoint or opinion. Additionally, all possible risks associated with this research are noted throughout the article.

The only potential issue with this article is that it does not explore any counterarguments or alternative points of view regarding its findings. While this is understandable given the scope of the paper, it would have been beneficial if some counterarguments were discussed in order to provide a more comprehensive overview of the topic at hand.

# Topics for further research:

* Heat stress response in maize
* Transcription factor binding in heat stress
* Cis- and trans-acting eQTLs
* Differential heat responses of alleles
* Genomic elements mapping to heat stress
* Transient expression assays for heat stress

# Report location:

<https://www.fullpicture.app/item/4918c7ec05f96c16e53e1efc08c59ec4>