# Article information:

CDPKs CPK6 and CPK3 Function in ABA Regulation of Guard Cell S-Type Anion- and Ca2+- Permeable Channels and Stomatal Closure | PLOS Biology  
<https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.0040327>

# Article summary:

1. This article discusses the role of two Arabidopsis guard cell-expressed CDPK genes, CPK3 and CPK6, in ABA regulation of guard cell S-type anion- and Ca2+- permeable channels and stomatal closure.

2. The authors found that ABA and Ca2+ activation of slow-type anion channels and ABA activation of plasma membrane Ca2+-permeable channels were impaired in independent alleles of single and double cpk3cpk6 mutant guard cells.

3. Imposed Ca2+ oscillation experiments revealed that Ca2+-reactive stomatal closure was reduced in CDPK double mutant plants, but long-lasting Ca2+-programmed stomatal closure was not impaired.

# 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:

This article is a peer reviewed research paper published in PLOS Biology, which is a reliable source for scientific information. The authors have provided evidence to support their claims through experiments conducted on Arabidopsis plants with mutated CDPK genes. They have also discussed the implications of their findings on the role of CDPKs in ABA regulation of guard cell S-type anion- and Ca2+- permeable channels and stomatal closure.

The article does not appear to be biased or one sided as it presents both sides equally by discussing the implications of their findings as well as potential risks associated with their experiments. Furthermore, all claims made are supported by evidence from experiments conducted on Arabidopsis plants with mutated CDPK genes. The authors have also acknowledged potential limitations to their study such as the possibility that other proteins may be involved in this process or that other factors may affect the results obtained from their experiments.

In conclusion, this article appears to be trustworthy and reliable due to its peer review status, lack of bias or one sidedness, supported claims, acknowledgement of potential limitations, and discussion of both sides equally.

# Topics for further research:

* CDPKs and ABA regulation
* Guard cell S-type anion- and Ca2+- permeable channels
* Stomatal closure mechanisms
* Arabidopsis plant mutants
* CDPK gene mutations
* Role of CDPKs in plant physiology

# Report location:

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