# Article information:

Insulin signaling in the long-lived reproductive caste of ants | Science
[https://www.science.org/doi/10.1126/science.abm8767?url\_ver=Z39.88-2003=ori%3Arid%3Acrossref.org=cr\_pub++0pubmed](https://www.science.org/doi/10.1126/science.abm8767?url_ver=Z39.88-2003&rfr_id=ori%3Arid%3Acrossref.org&rfr_dat=cr_pub++0pubmed)

# Article summary:

1. The insulin and insulin-like growth factor signaling pathway is activated to promote reproduction in the long-lived reproductive caste of ants, which also shortens life span.

2. Increased production of a protein that binds insulin-like molecules in the hemolymph might account for the difference that allowed the longer life span of the pseudo-queen.

3. Studies have shown that increased activity of the insulin/insulin-like growth factor (IGF) signaling pathway required for reproduction leads to shorter life span in most animals.

# 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 evidence from multiple sources such as scientific studies and research papers to support its claims. The authors provide detailed information on their sources, including links to relevant websites and publications, which adds credibility to their work. Furthermore, they cite multiple studies from different species to back up their claims about the effects of insulin signaling on longevity in ants.

However, there are some potential biases present in the article. For example, while the authors discuss how increased activity of the insulin/insulin-like growth factor (IGF) signaling pathway can lead to shorter life spans in most animals, they do not explore any counterarguments or alternative explanations for this phenomenon. Additionally, while they provide evidence from multiple sources to support their claims about how increased production of a protein that binds insulin-like molecules can lead to longer life spans in ants, they do not discuss any possible risks associated with this process or any potential side effects it may have on other aspects of ant biology or behavior.

In conclusion, while this article is generally reliable and trustworthy due to its use of evidence from multiple sources and its clear citation practices, there are some potential biases present which should be taken into consideration when evaluating its content.

# Topics for further research:

* Insulin signaling pathway effects on longevity
* Risks associated with increased insulin production
* Alternative explanations for shorter life spans
* Side effects of increased insulin-like molecules
* Impact of insulin signaling on ant behavior
* Insulin-like growth factor (IGF) signaling pathway

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