# Article information:

PIKFYVE inhibition mitigates disease in models of diverse forms of ALS - ScienceDirect
<https://www.sciencedirect.com/science/article/abs/pii/S0092867423000053>

# Article summary:

1. PIKFYVE inhibition has been shown to mitigate disease in models of various forms of ALS.

2. PIKFYVE inhibition clears aggregation-prone proteins via exocytosis, reducing pathology and extending survival in ALS mouse models.

3. Chronic reduction of PIKFYVE activity is well tolerated and efficacious in TDP-43 mice.

# 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 for its claims through the use of iPSC and animal models, as well as patient-derived motor neurons representing diverse forms of ALS including C9ORF72, TARDBP, FUS, and sporadic. The article also provides data and code availability for further analysis by readers. However, there are some potential biases that should be noted. For example, the article does not explore any possible risks associated with PIKFYVE inhibition or present any counterarguments to its claims. Additionally, the article does not provide any evidence for its claims beyond the results from the iPSC and animal models used in the study; thus, further research is needed to confirm these findings in humans before they can be applied clinically. Furthermore, while the article does mention that PIKFYVE inhibition activates an unconventional protein clearance mechanism involving exocytosis of aggregation-prone proteins, it does not provide any details on how this process works or what implications it may have for treating ALS patients. Finally, while the article mentions that chronic reduction of PIKFYVE activity is well tolerated and efficacious in TDP-43 mice, it does not provide any information on how this could be applied to humans or what potential side effects may arise from such treatments.

# Topics for further research:

* Risks associated with PIKFYVE inhibition
* Unconventional protein clearance mechanism
* Exocytosis of aggregation-prone proteins
* PIKFYVE inhibition in humans
* Chronic reduction of PIKFYVE activity side effects
* PIKFYVE inhibition efficacy in TDP-43 mice

# Report location:

<https://www.fullpicture.app/item/d1addfab7e7c9424288e943d074d49fd>