# Article information:

Dendritic action potentials and computation in human layer 2/3 cortical neurons | Science  
<https://www.science.org/doi/10.1126/science.aax6239>

# Article summary:

1. Human layer 2/3 cortical neurons have a special developmental program that leads to the disproportionate thickening of the cortex.

2. Gidon et al. investigated the dendritic physiology of these neurons and discovered a class of calcium-mediated dendritic action potentials (dCaAPs).

3. These dCaAPs enable single neurons to solve two long-standing computational problems in neuroscience that were considered to require multilayer neural networks.

# 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 is based on research conducted by Gidon et al., which was published in Science magazine. The article provides detailed information about the research findings, including descriptions of the experiments conducted and their results. The article also includes figures and tables to illustrate the data collected from the experiments. Furthermore, the article does not appear to be biased or one-sided, as it presents both sides of the argument equally and objectively. Additionally, there are no unsupported claims or missing points of consideration in the article, as all claims are supported by evidence from experiments conducted by Gidon et al.

However, there are some areas where the article could be improved upon. For example, while it does provide an overview of the research findings, it does not explore any counterarguments or alternative explanations for these findings. Additionally, while it does mention possible risks associated with this research (e.g., using brain tissue from epilepsy patients), it does not provide any further details on these risks or how they can be mitigated. Finally, while there is no promotional content in this article, it could benefit from more discussion on how these findings can be applied in practice and what implications they may have for future research in neuroscience.

# Topics for further research:

* Counterarguments to Gidon et al. research
* Alternative explanations for Gidon et al. findings
* Risks associated with using brain tissue from epilepsy patients
* Implications of Gidon et al. research for neuroscience
* Practical applications of Gidon et al. research
* Future research in neuroscience based on Gidon et al. findings

# Report location:

<https://www.fullpicture.app/item/f10c546773cdc52f41c8f4a5ccc0fac4>