# Article information:

MARS2 drives metabolic switch of non-small-cell lung cancer cells via interaction with MCU - PubMed  
<https://pubmed.ncbi.nlm.nih.gov/36774778/>

# Article summary:

1. MARS2 interacts with MCU and stimulates mitochondrial Ca2+ influx.

2. Methionine binding to MARS2 acts as a molecular switch that regulates MARS2-MCU interaction, leading to metabolic rewiring from glycolysis into pentose phosphate pathway and inhibition of epithelial-mesenchymal transition (EMT).

3. Expression of MARS2 is regulated by ZEB1 transcription factor in response to Wnt signaling, which affects cellular redox state via p53.

# 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 experiments such as confocal microscopy, flow cytometry assay, western blot analysis, G6PDH activity assay, NADPH assay, ATP production profile assay, extracellular acidification rate (ECAR) assay and oxygen consumption rate (OCR) assay. The authors also provide detailed explanations for their findings and discuss potential implications of their results.

However, there are some potential biases in the article that should be noted. For example, the authors do not explore any counterarguments or alternative explanations for their findings; they only present one side of the argument without considering other possible interpretations or implications of their results. Additionally, the authors do not mention any potential risks associated with their findings or any possible limitations of their study; this could lead to readers making decisions based on incomplete information. Furthermore, while the authors provide evidence for their claims through experiments such as confocal microscopy and western blot analysis, they do not provide any evidence for how these experiments were conducted or what methods were used; this could lead to readers questioning the validity of the results presented in the article. Finally, while the authors discuss potential implications of their results in terms of cancer metabolism and EMT regulation, they do not discuss any other potential applications or implications that could arise from their findings; this could lead to readers missing out on important points that could be explored further in future research.

# Topics for further research:

* Cancer metabolism implications
* Epithelial-mesenchymal transition regulation
* Confocal microscopy methods
* Western blot analysis techniques
* G6PDH activity assay
* Extracellular acidification rate (ECAR) assay

# Report location:

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