# Article information:

Sarcopenia Induced by Chronic Liver Disease in Mice Requires the Expression of the Bile Acids Membrane Receptor TGR5 - PMC
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7662491/>

# Article summary:

1. Sarcopenia is a condition of muscle dysfunction commonly associated with chronic liver disease (CLD), characterized by a decline in muscle strength, the activation of the ubiquitin-proteasome system (UPS), and oxidative stress.

2. The bile acids membrane receptor TGR5 plays a crucial role in the development of sarcopenia induced by CLD in mice, as all sarcopenia features induced by the DDC-supplemented diet in mice are dependent on TGR5 receptor expression.

3. UPS overactivation and oxidative stress were abolished in tibialis anterior muscles from TGR5−/− mice, indicating that TGR5 signaling is necessary for these processes to occur.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

该文章是一项针对小鼠慢性肝病引起肌肉萎缩的研究，主要探讨胆汁酸膜受体TGR5在这一过程中的作用。文章提到，通过DDC诱导小鼠慢性肝病可以导致血液中胆汁酸水平升高，并且这种情况下TGR5表达增加，从而引发了肌肉萎缩。作者通过比较野生型小鼠和TGR5基因敲除小鼠的实验结果，得出了TGR5在这一过程中的重要作用。

然而，该文章存在以下几个问题：

1. 偏见来源：该文章只关注了TGR5在慢性肝病引起的肌肉萎缩中的作用，没有考虑其他可能影响这一过程的因素。例如，是否有其他因素也会影响胆汁酸水平或者UPS系统活性等指标？

2. 片面报道：该文章只报道了实验结果支持TGR5在这一过程中的作用，并没有探讨其他可能解释实验结果的原因。例如，在TGR5基因敲除小鼠中是否有其他代偿机制发挥了作用？

3. 缺失考虑点：该文章没有考虑到人类患者与小鼠模型之间存在差异。例如，在人类患者身上是否也存在类似于小鼠模型中所观察到的现象？

4. 主张缺失证据：尽管作者声称所有观察到的现象都与TGR5表达相关，但是并没有提供足够证据来支持这一主张。例如，在野生型小鼠和基因敲除小鼠之间是否存在其他差异？

综上所述，该文章存在多个问题需要进一步探讨和验证。同时，在进行科学研究时应当注意避免片面报道、偏袒、宣传内容等问题，并且应当平等地呈现双方观点以及可能存在的风险和不确定性。

# Topics for further research:

* Other factors affecting bile acid levels or UPS system activity
* Other possible explanations for the experimental results
* Differences between human patients and mouse models
* Insufficient evidence to support the claim that all observed phenomena are related to TGR5 expression
* Avoiding one-sided reporting
* bias
* and propaganda in scientific research
* Presenting both sides of the argument and potential risks and uncertainties equally

# Report location:

<https://www.fullpicture.app/item/b31d1b097cff5ef42a69d43786dec8eb>