# Article information:

The complex structure of bile salt hydrolase from Lactobacillus salivarius reveals the structural basis of substrate specificity - PMC
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6711994/>

# Article summary:

1. The gut bacterial bile salt hydrolase (BSH) plays a critical role in host lipid metabolism and energy harvest, making it a promising target for developing new therapies to regulate obesity in humans and novel non-antibiotic growth promoters for food animals.

2. The crystal structure of BSH from Lactobacillus salivarius (lsBSH) soaked with glycocholic acid (GCA), a substrate, reveals the structural basis of substrate specificity.

3. Site-directed mutagenesis of lsBSH demonstrated that Cys2 and Asn171 are critical for enzymatic activity, while Tyr24, Phe65 and Gln257 contribute to the substrate specificity.

# 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:

The article is generally reliable and trustworthy as it provides detailed information about the structure of bile salt hydrolase from Lactobacillus salivarius (lsBSH) soaked with glycocholic acid (GCA), a substrate, which reveals the structural basis of substrate specificity. The article also provides evidence from molecular dynamics simulations and site-directed mutagenesis experiments to support its claims.

However, there are some potential biases in the article that should be noted. For example, the article does not provide any information about possible risks associated with using BSH inhibitors as animal growth promoters or therapies to regulate obesity in humans. Additionally, the article does not explore any counterarguments or present both sides equally when discussing the potential use of BSH inhibitors as animal growth promoters or therapies to regulate obesity in humans. Furthermore, there is no mention of any other potential applications or implications of this research beyond those mentioned in the article. Finally, there is some promotional content in the article which could be seen as biased towards promoting BSH inhibitors as animal growth promoters or therapies to regulate obesity in humans without providing sufficient evidence for their efficacy or safety.

# Topics for further research:

* Bile salt hydrolase inhibitors risks
* Bile salt hydrolase inhibitors safety
* Animal growth promoters efficacy
* Obesity therapies efficacy
* Alternative applications of bile salt hydrolase
* Implications of bile salt hydrolase research

# Report location:

<https://www.fullpicture.app/item/94e939d43bf93565755bf5c80c625e44>