

Review of: "Decoding the Promiscuous Activity of Bile Salt Hydrolase"

Masato Takahashi

Potential competing interests: No potential competing interests to declare.

This comment addresses the paper by Rimal et al. (2024) on the potential mechanisms of promiscuity in bile salt hydrolase (BSH). The authors propose a novel hypothesis suggesting that bile salts function both as substrates and as micelle-forming agents, which facilitate the catalytic activity of BSH. This hypothesis is intriguing and offers a new perspective on understanding catalytic activity in micellar environments. However, please consider the following points: While the proposed mechanism is interesting, adding a visual figure to illustrate the hypothesis would enhance understanding. Specifically, a diagram showing how bile salts form micellar environments and how this impacts BSH's catalytic activity would be useful. Additionally, including specific examples of BSH promiscuity and examples of promiscuity in other enzymes would provide deeper context and background for the paper.