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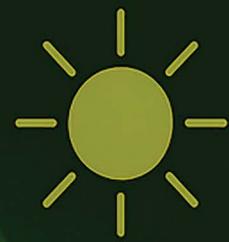
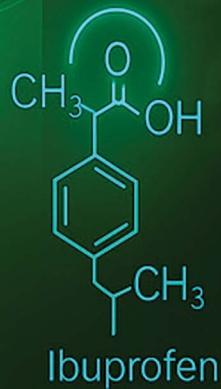
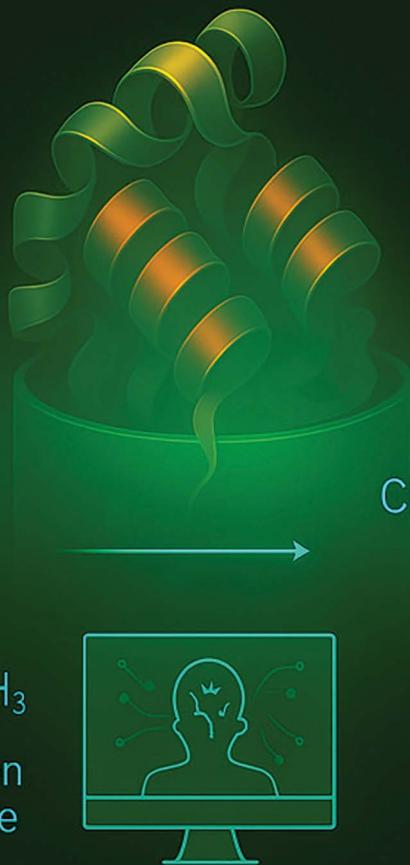
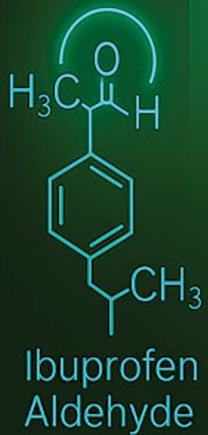


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Reimagining Ibuprofen - sustainably, through digital biology

Showcasing research from Naveen Kulkarni's group at Quantumzyme LLP, Bangalore, India.

In silico enzyme engineering of aldehyde dehydrogenase for eco-friendly ibuprofen synthesis

This study demonstrates a major shift in ibuprofen production—from chemical synthesis to biocatalysis. Through *in silico* enzyme engineering, an aldehyde dehydrogenase is redesigned to convert ibuprofen aldehyde into ibuprofen under greener, milder conditions, symbolizing the fusion of computation and catalysis for sustainable pharmaceutical manufacturing.

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As featured in:



See Naveen Kulkarni *et al.*,
RSC Sustainability, 2025, **3**, 5495.