

# EES Catalysis

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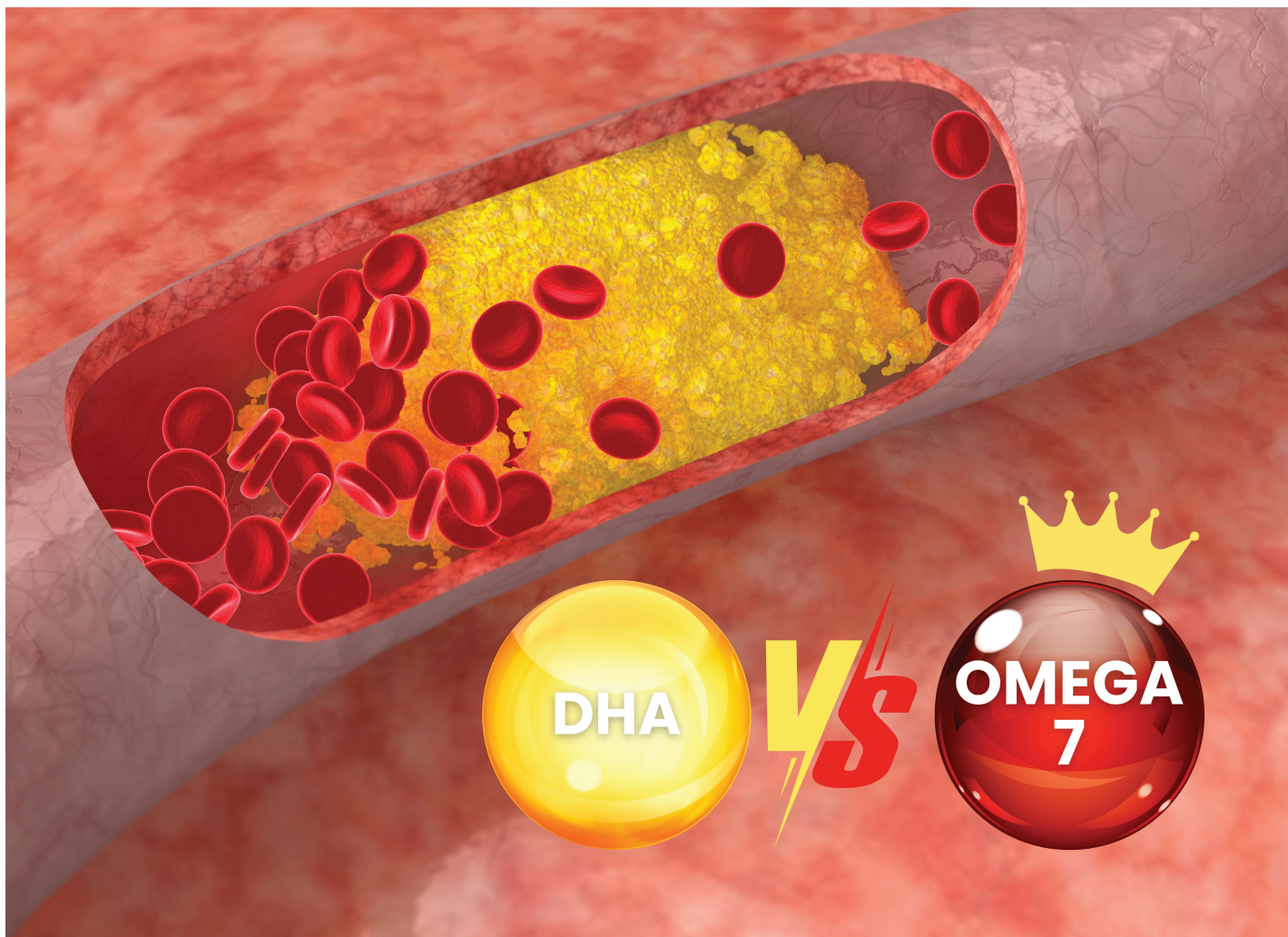
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**Fundamental questions  
Elemental answers**





**Showcasing research from Professor Qiang Peng's laboratory, College of Food Science and Engineering, Northwest A&F University, Yangling, China**

The comparative effects of  $\omega$ -7 fatty acid-rich sea buckthorn oil and  $\omega$ -3 fatty acid-rich DHA algal oil on improving high-fat diet-induced hyperlipidemia

This study evaluates the effects of omega-7 fatty acid-rich sea buckthorn oil and omega-3 fatty acid-rich DHA algal oil on hyperlipidemia induced by a high-fat diet in mice. It investigates how these oils influence lipid metabolism, oxidative stress, and inflammation through the PPAR $\gamma$ -LXR $\alpha$ -ABCA1/ABCG1 signaling pathway. Results indicate that both oils, especially when combined, significantly improve lipid profiles, reduce hepatic steatosis, and promote cardiovascular health, suggesting their potential as nutraceutical supplements for managing hyperlipidemia and related metabolic disorders.

**As featured in:**



See Qiang Peng *et al.*, *Food Funct.*, 2025, **16**, 1241.