

Cofactor modifications in flavoproteins

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Flavoproteins play a central role in the catalysis of a wide variety of redox reactions due to their flavin cofactor. Because of these reactions, there is great interest in their potential applications in biotechnology¹. To further improve their properties and reactivity, changes have been made not only to the amino acid sequence but also to the flavin cofactor itself.

This presentation will highlight the advantages of naturally occurring and laboratory-produced modifications to flavoprotein cofactors. The modifications will be evaluated using established flavoprotein systems, which include blue light photoreceptors that undergo light-induced electron transfer² and a flavin-dependent “ene” reductase.

1. Walsh, C. T. and Wencewicz, T. A., *Natural Product Reports* **2013**, 30, 175-200.
2. Okasha, M., et al., *The FEBS Journal* **2025**, 292, 4254-4271.