

## Biotransformation of Host Plant Flavonoids by the Fungal Endophyte *Epicoccum nigrum*

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<b>Abstract</b>	<p>Fermentation of the fungus <i>Epicoccum nigrum</i> isolated from leaves of <i>Salix</i> sp. on green lentil solid medium yielded the flavonol kaempferol (3) as well as two kaempferol O-diglyco-sides (1 and 2) including the new compound 1. The fungal flavonoids bear strong structural similarities to kaempferol derivatives such as kaempferol O-glycoside (4) being present in green lentils. Furthermore, feeding experiments were conducted by adding flavonoids (kaempferol and rutin) as precursors to solid rice media followed by HPLC and LC-MS analyses. Fermentation of the fungus on flavonoid free solid rice medium afforded flavonoid free extracts indicating that the fungal flavonoids originate through hydrolytic cleavage of kaempferol glycosides such as 4 followed by glycosylation and acetylation. This study suggests that <i>E. nigrum</i> is capable of biotransformation reactions of plant derived flavonoids whereas de novo biosynthesis of flavonoids is less likely.</p>
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