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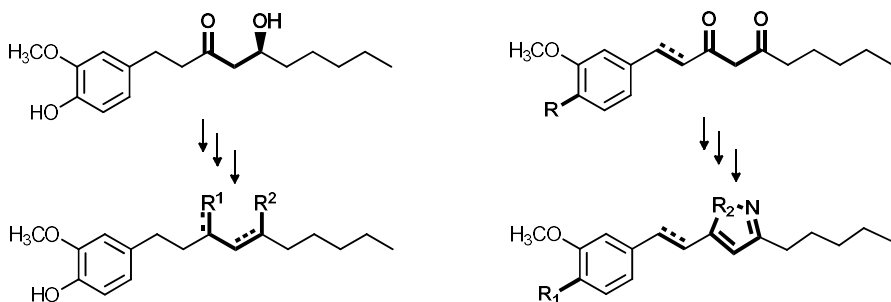
Isolation and synthesis of 6-gingerol and 6-gingerdione derivatives

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Ginger (*Zingiber officinale* Roscoe) has been used as a spice and a traditional remedy since ancient times, especially in Chinese herbal medicine [1,2]. A wide array of bioactivities were reported regarding ginger extract, e.g. antioxidant, anti-inflammatory, antiemetic, anticancer activity [3]. Most of the bioactivities had been correlated to gingerols and shogaols, the most abundant secondary metabolites in ginger [4].

In our work, we aimed to investigate the chemical space around 6-gingerol by introducing different changes in the skeleton and investigating the bioactivity of the resulting derivatives. The current work also focuses on the total synthesis of 6-gingerdione, another important compound in ginger root, and its heterocyclic analogues. So far, six molecules have been synthesized and characterized; the final purification and structure elucidation of further derivatives are currently in progress.



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