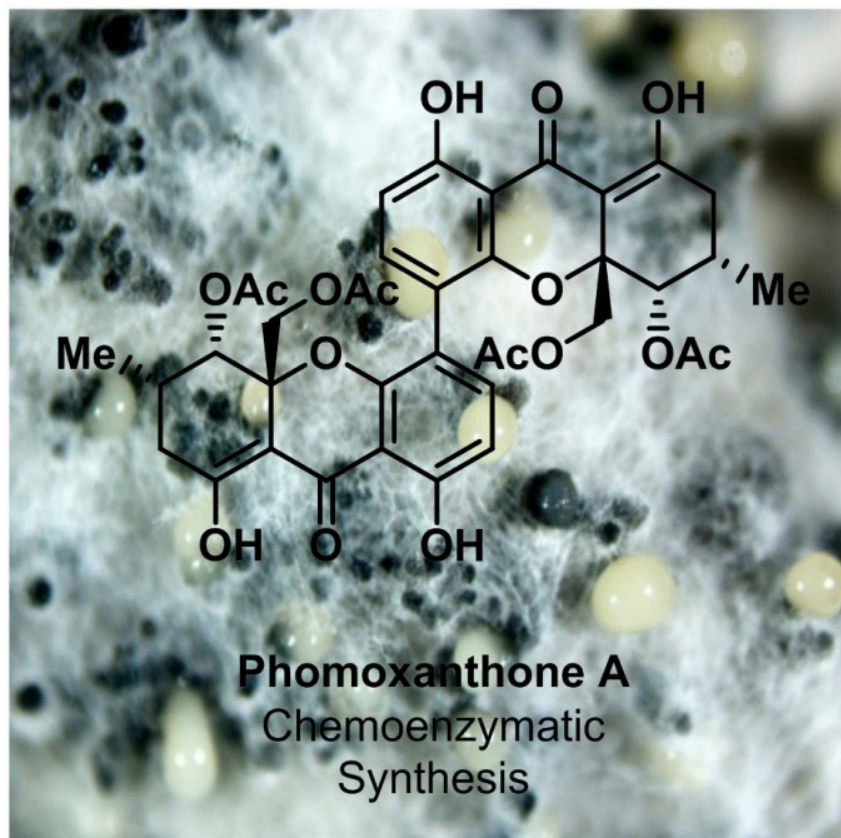


Towards the Synthesis of Xanthone based Natural Products and their Analogous



The tetrahydroxanthone dimer Phomoxanthone A, which had been isolated from the fungal endophyte *Phomopsis longicolla*, has shown to possess strong and selective pro-apoptotic activities against a variety of human cancer cell lines as well as an immune-activating effect. On the basis of our experience in the field of chemo-enzymatic total synthesis, a route towards this bioactive and interesting natural product is envisioned. In doing so, a diversity-oriented approach was chosen to enable the preparation of a panel of structural analogues. On the basis of further investigations in close cooperation with other GRK-members (physiological and biological assays, molecular-dynamics simulations, etc.) a deeper insight and understanding of the structure-activity relationship of Phomoxanthone A and its derivatives is hoped to be achieved.

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