

Zoosporicidal Activities of Anacardic Acids against *Aphanomyces cochlioides*

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The EtOAc soluble constituents of the unripe fruits of *Ginkgo biloba* showed motility inhibition followed by lysis of zoospores of the phytopathogenic *Aphanomyces cochlioides*. We purified 22:1- ω^7 -anacardic acid (**1**), 24:1- ω^9 -anacardic acid (**2**) and 22:0-anacardic acid (**3**), together with other related compounds, 21:1- ω^7 -cardol (**4**) and 21:1- ω^7 -cardanol (**5**) from the crude extracts of *Ginkgo* fruits. Amongst them, compound **1** was a major active agent in quality and quantity, and showed potent motility inhibition (98% in 30 min) followed by lysis (55% in 3 h) of the zoospores at 1×10^{-7} M. The 2-*O*-methyl derivative (**1-c**) of **1** displayed antibacterial activity against *Bacillus subtilis*, but practically inactive to *Escherichia coli*. A brief study on structure-activity relationships revealed that a carboxyl group on the aromatic ring and an unsaturated side chain in the anacardic acid derivative are important for strong motility inhibitory and lytic activities against the zoospore.