

데커시놀 파생물질들의 항징균제로서의 활용

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Useful Applications Decursinol Derivatives as Biochemical Fungicides

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Natural products decursin and decursinol angelate were recently reported as benign fungicides for controlling rice blast. Inspired by the structural similarity of the coumarin compounds and gained hint from the skeletal motifs, we designed and prepared synthetic compounds to increase the natural product efficacy and evaluated their antifungal activities against various plant disease pathogens *in vitro*. Synthetically prepared compound 4 and 5 indeed suppressed the mycelial growth of *B. cinerea*, *F. oxysporum*, *P. italicum*, and *R. quercus-mongolicae*. Additionally, compound 5 effectively prevents the growth of *C. coccodes* and *C. parasitica*. Furthermore, both 4 and 5 possess better inhibitory activities on spore germination of *F. oxysporum* and *M. oryzae* than the natural product decursin. These results suggest that the effect of the lead compound for plant disease protection can be improved by tuning the structure of the original natural product and decursinol chloroacrylates 4 and 5 are candidates for the control of *F. oxysporum* and *M. oryzae*.

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