# Design and Synthesis of Glabridin Analogues as Potent Anticancer Agents

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## ABSTRACT

The present study focuses on the identification and structural optimization of *Glabridin*, a bioactive constituent isolated from *Glycyrrhiza glabra*, known for its antimycobacterial and anticancer properties. Based on preliminary findings, we designed and synthesized novel analogues of Glabridin, aimed at enhancing antiestrogenic activity. Two distinct series—2,3-diaryl-1-benzopyrans and 4-aryl chromenones—were developed and screened against various cancer cell lines. Notably, several analogues demonstrated potent cytotoxicity, particularly against MCF-7 hormone-dependent breast cancer cells. These results highlight glabridin analogues as potential candidates for anticancer drug development. The promising analogues from both series require additional structural improvement to enhance their therapeutic potential.



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