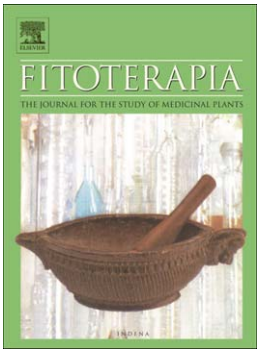

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Cytotoxic Cochlioquinone Derivatives from the Endophytic Fungus *Bipolaris sorokiniana* Derived from *Pogostemon cablin*

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ABSTRACT

Chemical investigation of the liquid culture of the endophytic fungus *Bipolaris sorokiniana* A606, which was isolated from the medicinal plant *Pogostemon cablin* resulted in the isolation of four new cytotoxic compounds, named isocochlioquinones D–E (**1–2**) and cochlioquinones G–H (**3–4**), along with five known cochlioquinone analogues (**5–9**). Their structures were determined on the basis of extensive spectroscopic analysis. Isocochlioquinone D (**1**) possessed a rare benzothiazin-3-one moiety and cochlioquinone G (**3**) was the first example of cochlioquinones bearing an indole-4,7-dione fragment. All of the isolates (**1–9**) were evaluated for their cytotoxic activities against MCF-7, NCI-H460, SF-268 and HepG-2 tumor cell lines by the sulforhodamine B (SRB) assay. Compounds **4** and **6–9**, featuring a cochlioquinone core, exhibited potent cytotoxicities *in vitro* against the four tumor cell lines, and a preliminary structure-activity relationship of these compounds was also discussed.

Keywords: *Bipolaris sorokiniana*; endophytic fungus; *Pogostemon cablin*; cochlioquinones; cytotoxic activity

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