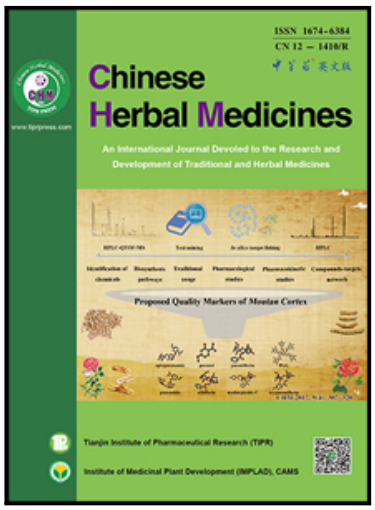

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Letters

Chemical Constituents from Endophytic Fungus *Plectosphaerella cucumerina* YCTA2Z1 of *Cynanchum auriculatum*

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ABSTRACT

Objective To study the chemical constituents from the EtOAc extract of endophytic fungal *Plectosphaerella cucumerina* YCTA2Z1. **Methods** The chemical constituents were isolated and purified by silica gel column, Sephadex LH-20, and reverse-phase C-18 column chromatography as well as crystallization. **Results** Thirteen compounds were isolated from the EtOAc extract of the fungal strain YCTA2Z1. Their chemical structures were elucidated according to the spectral evidence. They were identified as caudatin (**1**), baishouwubenzophenone (**2**), cynandione B (**3**), asterbatanoside A (**4**), p-hydroxyphenethyl-*O*-β-*D*-glycoside (**5**), caffeic acid (**6**), ferulic acid (**7**), 2,5-dihydroxyacetophenone (**8**), protocatechuic acid (**9**), vanillic acid (**10**), stearic acid (**11**), azelaic acid (**12**), and succinic acid (13). **Conclusions** It is the first chemical study on endophytic fungi from *Cynanchum auriculatum* and all the compounds are obtained from the species, the genus, as well as the family *Plectosphaerellaceae* for the first time.

Key words

chemical constituents; *Cynanchum auriculatum* Royle ex Wight; endophytic fungi; *Plectosphaerella cucumerina* YCTA2Z1

1. Introduction

Endophytic fungi are rich source of secondary metabolites, adapting themselves to reside in the living tissues of virtually all plants (Keith and Jenny, 1999; Gary et al, 2004; Chung et al, 2013). During the long co-evolution of endophytic fungi and their host plants, endophytic fungi have been shown to increase the fitness of their hosts against environmental stress factors. Accordingly, endophytic fungi can produce structurally unique or analogous compounds associated with their host plants (Li and Hu, 2005; Ma et al, 2015). Endophytic fungi have been a rich source of organic compounds. The root of *Cynanchum auriculatum* Royle ex Wight (Asclepiadaceae), Baishouwu in Chinese, is a famous traditional herbal medicine used in folk for the treatment of geriatric diseases and prolonging life (Jiangsu New Medical College, 2004). Previous chemical studies only focused on the plant of *C. auriculatum*, there is no report on the endophytic fungi of *C. auriculatum* (Bai et al, 2007; Gu and Hao, 2016). So far, only one *Plectosphaerella* species has been chemically investigated. Polysaccharide F1SS and indole-3-carboxylic acid has been isolated from *P. cucumerina*, which provides a little information for the chemical study on *Plectosphaerella* species (Oussama et al,

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