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Protective effects of diketopiperazines from *Moslae Herba* against influenza A virus-induced pulmonary inflammation via inhibition of viral replication and platelets aggregation

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Abstract

Ethnopharmacological relevance: *Moslae Herba* (MH) is broadly used as an antiviral, antipyretic and anticoagulant drug which effectively treats respiratory diseases including cough, asthma, throat, cold and flu.

Aim of this study: The excessive inflammation of the lungs is the hallmark of severe influenza A virus (IAV) infection, while platelet aggregation and its subsequent microvascular thrombosis can exacerbate IAV-induced lung injury. Thus, inhibition of platelet aggregation can be a potential target for IAV treatment. Previous studies focus on the flavonoids from MH and their anti-inflammatory activities, but the anticoagulant compounds and potential molecular mechanism of MH remains unclear. This study was to isolate and characterize diketopiperazines (DKPs) from MH and to explore the underlying anticoagulant mechanism on IAV infection models.

Materials and methods: EtOAc sub-extract separated from MH ethanolic extract was subjected to fractionation through column chromatography. The chemical structures of pure compounds were characterized by the spectral analysis. Antiviral activities of

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