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Determination of thirteen nucleosides and nucleobases in the natural fruiting body of *Ophiocordyceps sinensis* and its substitutes

Wenming Cheng[1,2], **Xun Zhang**[1], **Kun Wu**[1], **Jun Li**[1], **Weili Lu**[1] and **Chunru Li**[3]
[1]Anhui Medical University, China
[2]China Pharmaceutical University, China
[3]Anhui Agricultural University, China

Background: *Ophiocordyceps sinensis* is one of well-known and valuable traditional Chinese medicines. Due to the high price of the natural fruiting bodies of *Ophiocordyceps sinensis* (NFOS), scientists have focused on discovering suitable alternatives in recent years. Previous study indicates nucleosides and nucleobases are one of the most important markers of quality control. Reliably identified samples and applicable methods are important for quality control.

Materials and methods: The separation was performed on a TSKgel ODS-100V column (5 μm, 4.6 mm×250 mm). The mobile phase was an aqueous potassium dihydrogen phosphate - methanol solution using gradient elution. The UV wavelength was set at 260 nm.

Results: The optimized HPLC method was successfully applied for the quantitation of 13 nucleosides and nucleobasesin 15 batches of samples from eight *Ophiocordyceps* species and its allies in China. The contents of adenosine (quality marker in 9th China Pharmacopeia), inosine (higher in *Hirsutellahepiali, Acremoniumimplicatum* and NFOS), cordycepin (rich in the artificial fruiting bodies of *Cordycepsmilitaris*) and cytosine (abundant in the artificial fruiting bodies of *O. longissima*) seemed to be useful markers for quality control and distinction of different species.

Conclusion: The established method might apply as an alternative approach for the quality assessment of nucleosides and nucleobases in *Ophiocordyceps* species.

Biography

Wenming Cheng is assistant professor of Anhui Medical University. He completed his Ph.D in Organic Chemistry from University of Science and Technology of China. His main research interest is to discover bio-active compounds from herbal medicine. Currently he is involved in immunological-active ingredients from Cordyceps, an interesting fungi live on insects or other fungi.

chengwm919@hotmail.com