Corydalis turtschaninovii Bess. f. *yanhusuo* Y.H. Chou et C.C. Hsü

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49.1 Introduction

Yanhusuo, Rhizoma Corydalis, is the dry tuber of *Corydalis turtschaninovii* Bess. f. *yanhusuo* Y.H. Chou et C.C. Hsü (Papaveraceae), which is collected in early summer after the stems and leaves have withered. It is officially listed in the Chinese Pharmacopoeia and is used as an analgesic for the treatment of abdominalgia, menorrhalgia, menostasia, and traumatic pain.

Tetrahydropalmatine is listed in the Chinese Pharmacopoeia (1985), Vol II.

In addition to the officially listed *C. turtschaninovii* f. *yanhusuo* (*C. yanhusuo*), there are many species of the subgenus Capnites known to be used in traditional Chinese medicine or folk medicine, mainly as an analgesic, antirheumatic, and emmenagogue. These medicinal species are *Corydalis ambigua*, *C. decumbens*, *C. glaucescens*, *C. humosa*, *C. ledebouriana*, *C. remota*, *C. repens*, *C. schanginii*, and *C. ternata* [1]. Thirty species of *Corydalis* subgenus Capnoides in China were noted to be of medicinal value for the treatment of fever, bleeding, pain, infection, jaundice, irregular menstruation, hypertension, diarrhea, and tumors. These plants are *Corydalis adunca*, *C. balansae*, *C. bungeana*, *C. conspersa*, *C. curviflora*, *C. davidii*, *C. delavayi*, *C. denticulato-bracteata*, *C. edulis*, *C. hendersonii*, *C. impatiens*, *C. incisa*, *C. linearioides*, *C. melanochlora*, *C. mucronifera*, *C. ochotensis*, *C. ophiocarpa*, *C. pachypoda*, *C. pallida*, *C. racemosa*, *C. saxicola*, *C. scaberula*, *C. sheareri*, *C. speciosa*, *C. stricta*, *C. taliensis*, *C. temulifolia*, *C. thyrsiflora*, *C. tomentella*, and *C. trachycarpa* [2]. *C. stricta* Steph. and *C. bungeana* Turcz. are included in the appendix of the Chinese Pharmacopoeia.

49.2 Chemical Constituents

49.2.1 Chemical Constituents of *Corydalis ambigua*

The chemical constituents of the tuber of *C. ambigua* have been intensively investigated for the past 60 years [3]. Chou isolated a number of alkaloids from the tuber and named them Corydalis A, B, C, D, E [4], F, G, H [5], I [6], J, K [7], L, and M [8]. Corydalis A, B, C, D, E, G, I, K, and M were then identified as corydaline, tetrahydropalmatine, protopine, *l*-tetrahydrocoptisine [9], *dl*-tetrahydrocoptosine, corybulbine, glaucine, tetrahydrocolumbamine, and allocryptopine, respectively. Corydaline (*49-1*), corybulbine (*49-2*), tetrahydropalmatine (*49-3*), tetrahydrocolumbamine (*49-4*) , and tetrahydrocoptisine (*49-5*) are structurally all derived from 6*H*-dibenzo[*a*,*g*]-quinolizine (*49-6*), whereas glaucine (*49-7*) is derived from 4*H*-dibenzo[*de*,*g*]quinoline (*49-8*). The protopine-type alkaloids protopine (*49-9*)