

Antibacterial constituents from *Uncaria tomentosa*

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Received: 7 January 2011, Revised: 26 January 2011, Accepted: 27 January 2011

Abstract

traditionally used for treatment of several diseases including its theoretic use in microbial We have isolated three flavonoids (Artochamin C, 5'-Hydroxycudraflavone A and Dihydrocudraflavone B) based on bioactivity guided isolation. All compounds showed significant antibacterial activities against *Escherchia coli*, *Staphylococcus aureus*, *Klebsiella pneumoniae* and *Bacillus subtilis*. Artochamin C (**1**) was the most active among all compounds with MIC values ranging from 4.1 µg/mL to 6.7 µg/mL. Other compounds also exhibited considerable antibacterial activities. Neomycin was used as a positive control. Preliminary results of isolated compounds have justified ethnopharmacological use of *Uncaria tomentosa* in microbial infections.

Keywords: *Uncaria tomentosa*; Artochamin C; 5'-Hydroxycudraflavone A; Dihydrocudraflavone B; antibacterial; flavonoids

Introduction

Newly emerging resistance to microbial infections is a hard challenge for global pharmaceutical industry. New and effective therapeutic agents are necessary to strive for better health of mankind. Antimicrobial agents from natural products are one the major sources to discover potential antimicrobial agents. *Uncaria tomentosa* DC (Rubiaceae), is generally called as Cats claw, is a medicinal plant found natively in Peruvian Amazon. Traditional uses by Ashaninka Indians includes its use to treat disorders like arthritis, infections, heart disease, cancer, and other inflammatory diseases (Heitzman et al., 2005; Cheng et al., 2007). Woody vines are typically prepared in a ground tea-like preparation and served as a hot water concoction (Pilarski et al., 2007). Phytochemical studies have been