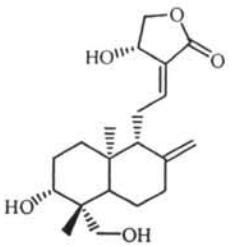
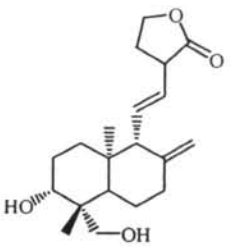
CHAPTER IV

CONCLUSION

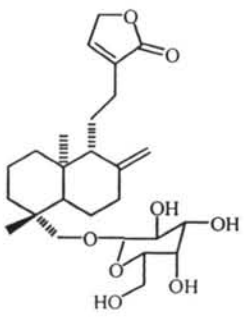
Chemical examination of the whole plant of *A. paniculata* and the seed kernels of *C. bonduc* led to the isolation of four Andrographolides (**1-4**), two iridoid glucoside, one flovonoid, and ten cassane diterpenoids. These isolated compounds included one new compound, Caesalpinin Q (**17**) isolated from *C. bonduc.* In addition, two iridoid glucosides **6** and **7** were isolated from *A. paniculata* for the first time in this study. The structures of the isolated compounds were summarized as followed.



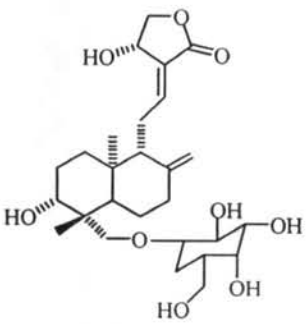
Andrographolide (**1**)



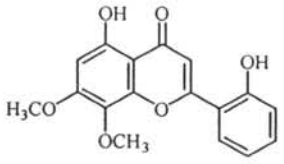
14-Deoxy-11,12 didehydro andrographolide (**2**)



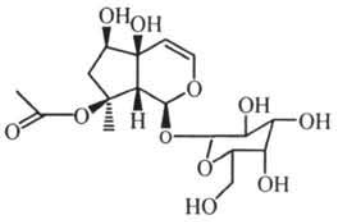
Neoandrographolide (**3**)



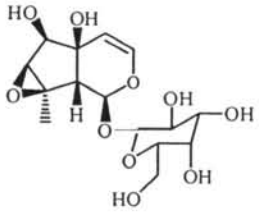
Andrographiside (**4**)



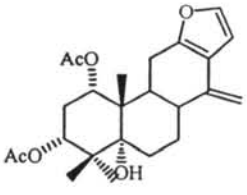
5,2'-Dihydroxy-7,8-dimethoxyflavone (**5**)



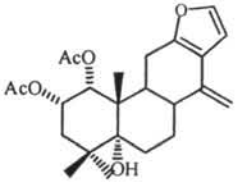
8-*O*-Acetylharpagide (**6**)



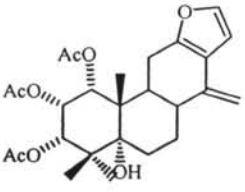
Antirrinoside (**7**)



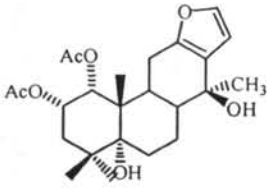
Caeselpinin C (**8**)



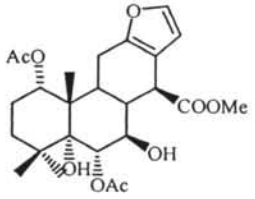
Caesalpinins P (**9**)



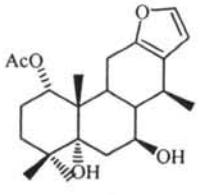
14(17)-Dehydrocaesalpin F (**10**)



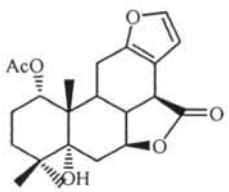
ε-Caesalpin (**11**)



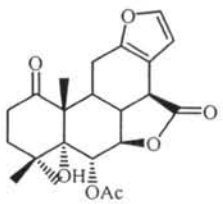
Bonducellpins C (**12**)



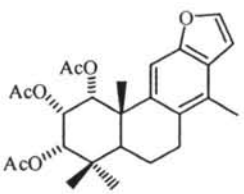
Caesalpinins K (**13**)



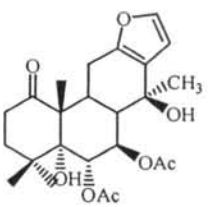
Caesalmin B (**14**)



Caesalpinins I (**15**)



2-Acetoxycaesaldekarin e (**16**)



Caesalpinin Q (**17**)

The isolated compounds from *A. paniculata* and *C. bonduc* were tested for their antimalarial against chloroquine-resistant strain K1 of *P. falciparum* and for their cytotoxicity against five human tumor cell lines; breast carcinoma (BT474), lung carcinoma (Chago), human hepatocarcinoma (Hep-G_2), gastric carcinoma (KATO-3), and colon carcinoma (SW620). Andrographolide (**1**) and flavone (**5**) showed good antimalarial activity against *P. falciparum*, while 14-Deoxy-11,12 didehydroandrographolide (**2**), Neoandrographolide (**3**), Andrographiside (**4**) including iridoid glucosides **6** and **7** were inactive. This was probably because of the loss of the C-14 hydroxy group and the presence of a glucose unit in their molecules. For cassane diterpenoids isolated from *C. bonduc*, all compounds showed significant antimalarial activity, but most of them showed weak cytotoxicity or were inactive.