Supporting Information

Cinchona Alkaloids from *Cinchona succirubra* and *C. ledgeriana*

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**Dr. Ya-Ping Liu**

State Key Laboratory of Phytochemistry and Plant Resources in West China
This file includes:

Figure 1S-6S. NMR and MS spectra of Cinchonanine A (1)

Figure 7S-12S. NMR and MS spectra of Cinchonanine B (2)

Figure 13S-18S. NMR and MS spectra of Cinchonanine C (3)

Figure 19S-24S. NMR and MS spectra of Cinchonanine D (4)

Figure 25S-30S. NMR and MS spectra of Cinchonanine E (5)

Figure 31S-36S. NMR and MS spectra of Cinchonanine F (6)

Figure 37S-42S. NMR and MS spectra of Cinchonanine G (7)
Figure 1S. $^1$H NMR of Cinchonanine A (1) in CDCl$_3$

Figure 2S. $^{13}$C NMR and DEPT of Cinchonanine A (1) in CDCl$_3$
Figure 3S. HSQC of Cinchonanine A (1) in CDCl₃

Figure 4S. HMBC of Cinchonanine A (1) in CDCl₃
Figure 5S. ROESY of Cinchonanine A (1) in CDCl₃

Figure 6S. HREIMS of Cinchonanine A (1)

**Single Mass Analysis (displaying only valid results)**

Tolerance = 10.0 PPM  /  DBE: min = 0.5, max = 40.0

Selected filters: None

Monoisotopic Mass, Odd and Even Electron Ions
13 formula(e) evaluated with 1 results within limits (up to 51 closest results for each mass)
Elements Used:
C: 0-200  H: 0-400  N: 2-2  O: 0-2

**Minimum:**

```
Mass  Calc. Mass  mDa  PPM  DBE  r-FIT  Formula
320.1526  320.1525  0.1  0.3  12.0  5551126.5  C20  H20  N2  O2
```
Figure 7S. $^1$H NMR of Cinchonanine B (2) in Me$_2$CO-$d_6$

![Figure 7S. $^1$H NMR of Cinchonanine B (2) in Me$_2$CO-$d_6$](image)

Figure 8S. $^{13}$C NMR and DEPT of Cinchonanine B (2) in Me$_2$CO-$d_6$

![Figure 8S. $^{13}$C NMR and DEPT of Cinchonanine B (2) in Me$_2$CO-$d_6$](image)
Figure 9S. HSQC of Cinchonanine B (2) in Me₂CO-\textit{d}_₆

Figure 10S. HMBC of Cinchonanine B (2) in Me₂CO-\textit{d}_₆
Figure 11S. ROESY of Cinchonanine B (2) in Me₂CO-d₆

Figure 12S. HREIMS of Cinchonanine B (2)

Elemental Composition Report

Single Mass Analysis (displaying only valid results)
Tolerance = 10.0 PPM / DBE: min = 0.5, max = 40.0
Selected filters: None

Monoisotopic Mass, Odd and Even Electron Ions
20 formula(e) evaluated with 1 results within limits (up to 51 closest results for each mass)
Elements Used:
C: 0-200  H: 0-400  N: 2-2  O: 0-4

17.35.31  22-Aug-2011
Voltage EH

Mass  Calc. Mass  mDa  PPM  DBE  i-FIT  Formula
308.1514  308.1525  -1.1  -3.6  11.9  5546257.5  C19  H2O  N2  O2
Figure 13S. $^1$H NMR of Cinchonanine C (3) in Me$_2$CO-$d_6$

Figure 14S. $^{13}$C NMR and DEPT of Cinchonanine C (3) in Me$_2$CO-$d_6$
Figure 15S. HSQC of Cinchonanine C (3) in Me₂CO-d₆

Figure 16S. HMBC of Cinchonanine C (3) in Me₂CO-d₆
Figure 17S. ROESY of Cinchonanine C (3) in Me$_2$CO-$d_6$

![ROESY of Cinchonanine C (3) in Me$_2$CO-$d_6$](image)

Figure 18S. HREIMS of Cinchonanine C (3)

![HREIMS of Cinchonanine C (3)](image)
Figure 19S. $^1$H NMR of Cinchonanine D (4) in CD$_3$OD

Figure 20S. $^{13}$C NMR and DEPT of Cinchonanine D (4) in CD$_3$OD
Figure 21S. HSQC of Cinchonanine D (4) in CD$_3$OD

Figure 22S. HMBC of Cinchonanine D (4) in CD$_3$OD
Figure 23S. ROESY of Cinchonanine D (4) in CD$_3$OD

Figure 24S. HREIMS of Cinchonanine D (4)
Figure 25S. $^1$H NMR of Cinchonanine E (5) in CDCl$_3$

Figure 26S. $^{13}$C NMR and DEPT of Cinchonanine E (5) in CDCl$_3$
Figure 27S. HSQC of Cinchonanine E (5) in CDCl₃

Figure 28S. HMBC of Cinchonainine E (5) in CDCl₃
Figure 29S. ROESY of Cinchonanine E (5) in CDCl₃

Figure 30S. HREIMS of Cinchonanine E (5)
Figure 31S. $^1$H NMR of Cinchonanine F (6) in Me$_2$CO-$d_6$

Figure 32S. $^{13}$C NMR and DEPT spectrum of Cinchonanine F (6) in Me$_2$CO-$d_6$
Figure 33S. HSQC of Cinchonanine F (6) in Me$_2$CO-$d_6$

Figure 34S. HMBC of Cinchonanine F (6) in Me$_2$CO-$d_6$
Figure 35S. ROESY of Cinchonanine F (6) in Me$_2$CO-$d_6$

Figure 36S. HREIMS of Cinchonanine F (6)
Figure 37S. $^1$H NMR of Cinchonanine G (7) in CDCl$_3$

Figure 38S. $^{13}$C NMR and DEPT of Cinchonanine G (7) in CDCl$_3$
Figure 39S. HSQC of Cinchonanine G (7) in CDCl₃

Figure 40S. HMBC of Cinchonanine G (7) in CDCl₃
Figure 41S. ROESY of Cinchonanine G (7) in CDCl₃

Figure 42S. HREIMS of Cinchonanine G (7)

Elemental Composition Report

Single Mass Analysis (displaying only valid results)
Tolerance = 10.0 PPM / DBE: min = 0.5, max = 40.0
Selected filters: None

Monoisotopic Mass, Odd and Even Electron Ions
20 formula(e) evaluated with 1 results within limits (up to 51 closest results for each mass)
Elements Used:
C: 0-200  H: 0-400  N: 2-2  O: 0-4

17:26:17 22-Aug-2011
Voltage El+
328.1782

Minimum:
Maximum:
Mass  Calc. Mass  mDa  PPM  DBE  L-PIT  Formula
328.1782  328.1787  -0.5  -1.5  9.0  5546042.0  C19 H24 N2 O3