

Isolation of Alkaloids from *Sinomenium acutum* by Centrifugal Partition Chromatography and their Ameliorating Effects on Dexamethasone-Induced Atrophy in C2C12 Myotubes

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Figure S1. ¹H-NMR spectrum of sinomenine (**1**) (400 MHz, CDCl₃).

Figure S2. ¹³C-NMR spectrum of sinomenine (**1**) (100 MHz, CDCl₃).

Figure S3. ESI-MS spectrum of sinomenine (**1**).

Figure S4. ¹H-NMR spectrum of magnoflorine (**2**) (400 MHz, D₂O).

Figure S5. ¹³C-NMR spectrum of magnoflorine (**2**) (100 MHz, D₂O).

Figure S6. ESI-MS spectrum of magnoflorine (**2**).

Figure S7. ¹H-NMR spectrum of acutumine (**3**) (400 MHz, DMSO-d₆).

Figure S8. ¹³C-NMR spectrum of acutumine (**3**) (100 MHz, DMSO-d₆).

Figure S9. ESI-MS spectrum of acutumine (**3**).

Figure S10. ¹H-NMR spectrum of N-feruloyltyramine (**4**) (400 MHz, DMSO-d₆).

Figure S11. ¹³C-NMR spectrum of N-feruloyltyramine (**4**) (100 MHz, DMSO-d₆).

Figure S12. ESI-MS spectrum of N-feruloyltyramine (**4**).

Figure S13. ¹H-NMR spectrum of dauricumine (**5**) (400 MHz, DMSO-d₆).

Figure S14. ¹³C-NMR spectrum of dauricumine (**5**) (100 MHz, DMSO-d₆).

Figure S15. ¹H-NMR spectrum of liriodendrin (**6**) (400 MHz, DMSO-d₆).

Figure S16. ¹³C-NMR spectrum of liriodendrin (**6**) (100 MHz, DMSO-d₆).

Figure S17. ESI-MS spectrum of liriodendrin (**6**).

Figure S18. ¹H-NMR spectrum of syringin (**7**) (400 MHz, DMSO-d₆).

Figure S19. ¹³C-NMR spectrum of syringin (**7**) (100 MHz, DMSO-d₆).

Figure S20. HPLC chromatogram of crude extract.

Table S1. Retention time and calibration curves of compounds **1** – **3**.

Figure S21. Photomicrograph of myotube cultures that were treated with vehicle alone.

Figure S22. Photomicrograph of myotube cultures that were treated with 1 μM dexamethasone.

Figure S23. Photomicrograph of myotube cultures that were treated with a combination of dexamethasone (1 μM) and *S. acutum* extract (30 μg/mL).

Figure S24. Summary of purification process using CPC from *S. acutum* extract.

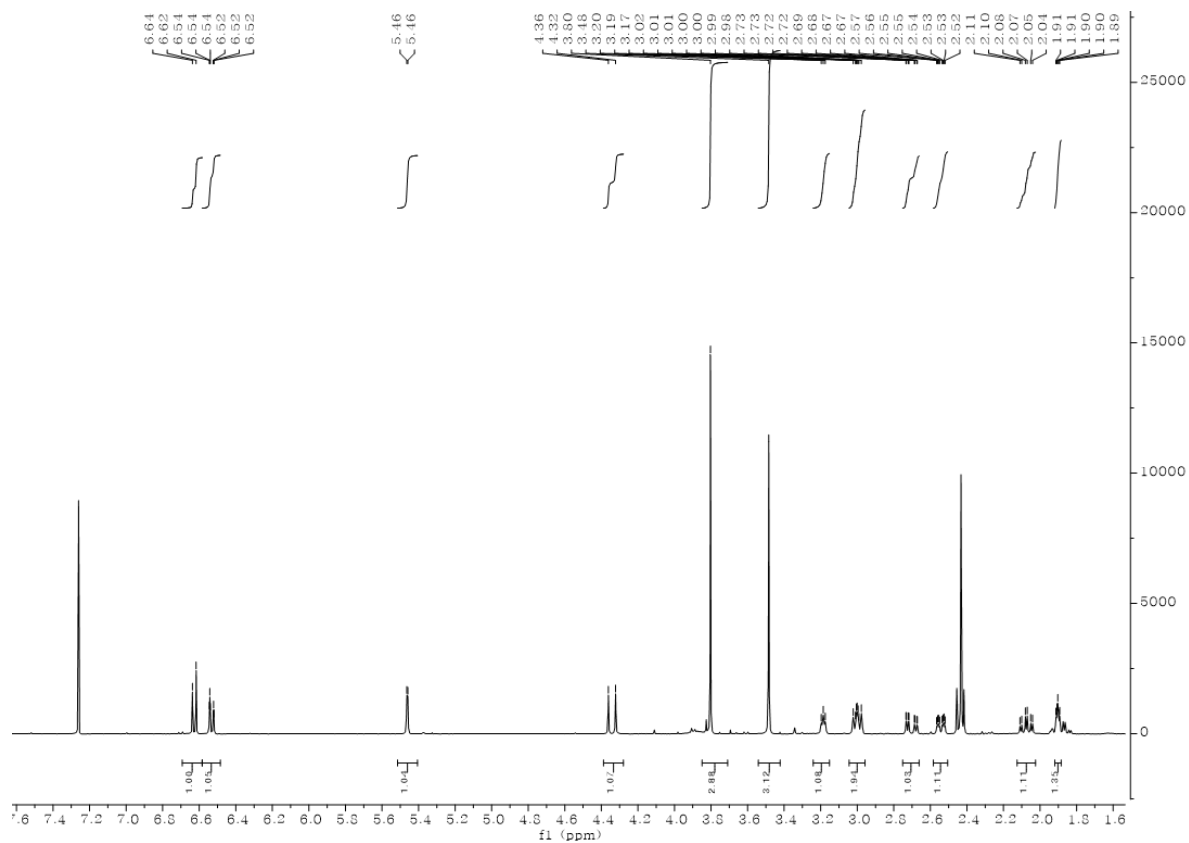


Figure S1. ¹H-NMR spectrum of sinomenine (**1**) (400 MHz, CDCl₃).

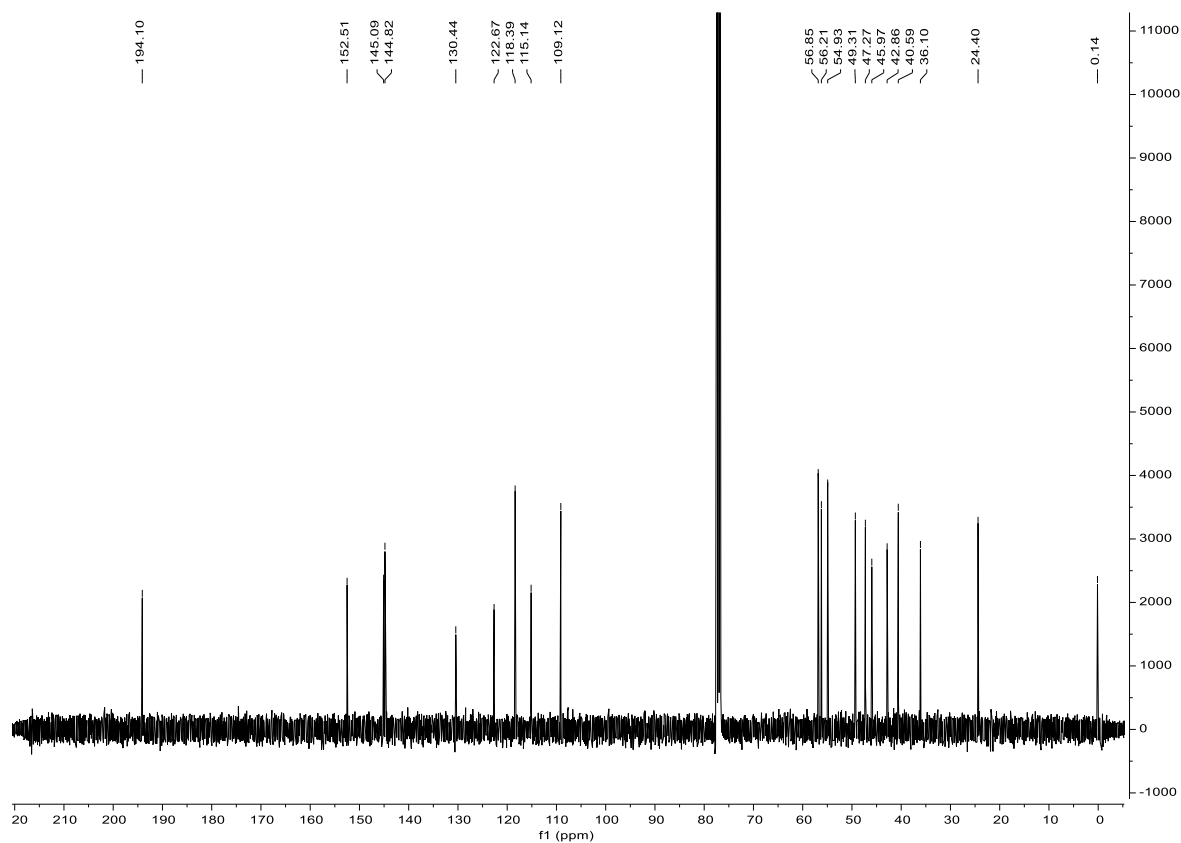


Figure S2. ¹³C-NMR spectrum of sinomenine (**1**) (100 MHz, CDCl₃).

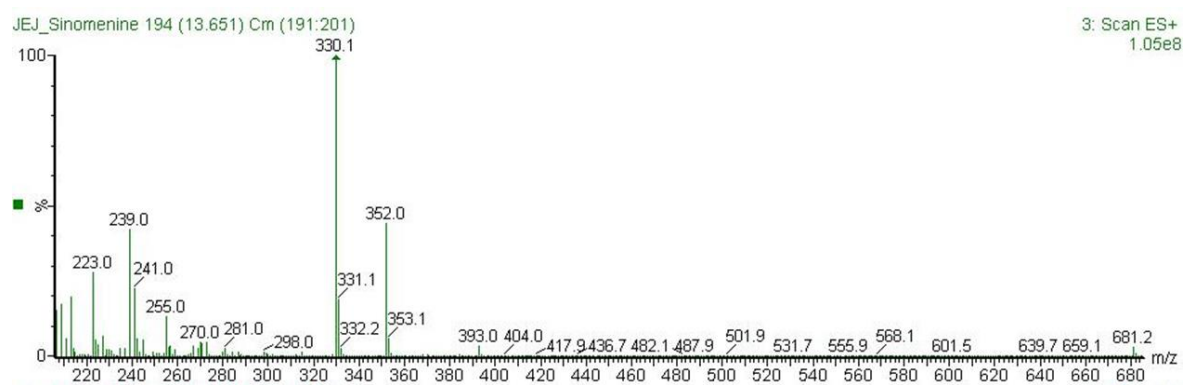


Figure S3. ESI-MS spectrum of sinomenine (**1**).

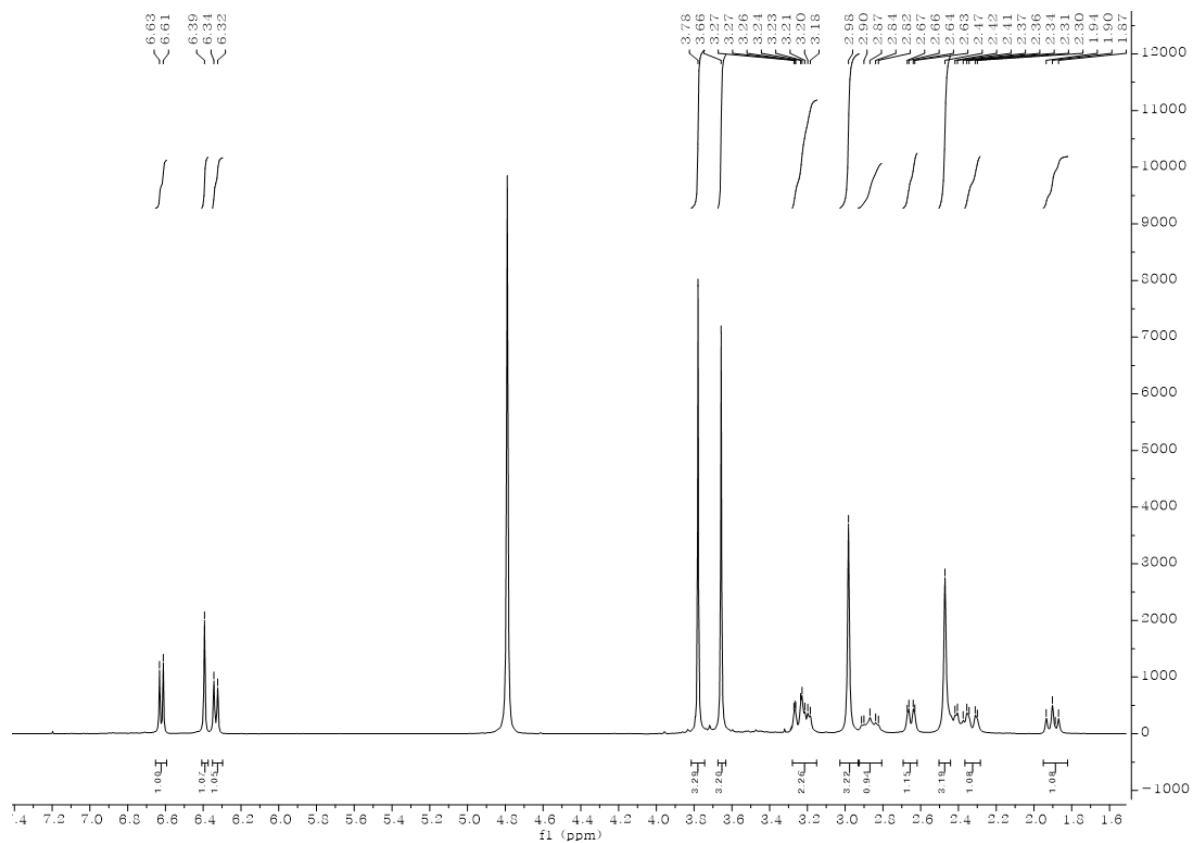


Figure S4. ¹H-NMR spectrum of magnoflorine (2) (400 MHz, D₂O).

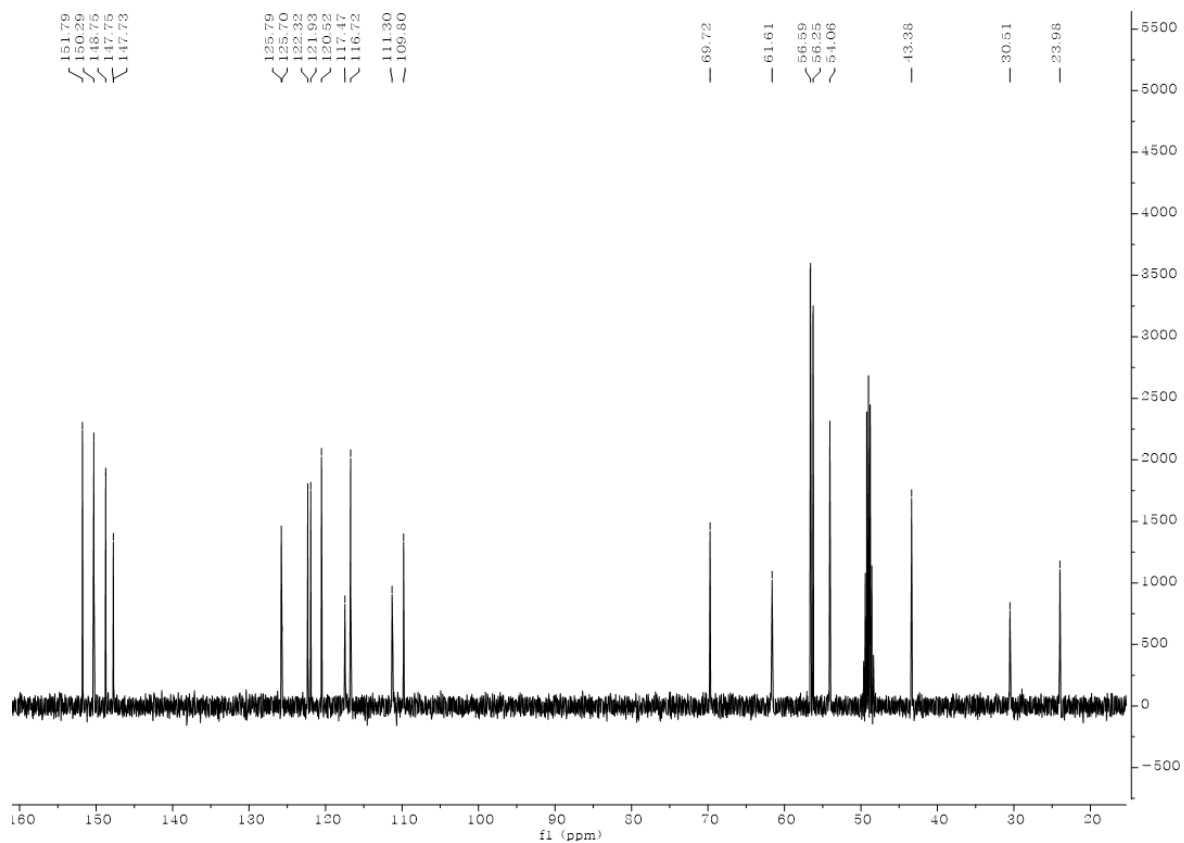


Figure S5. ¹³C-NMR spectrum of magnoflorine (2) (100 MHz, D₂O).

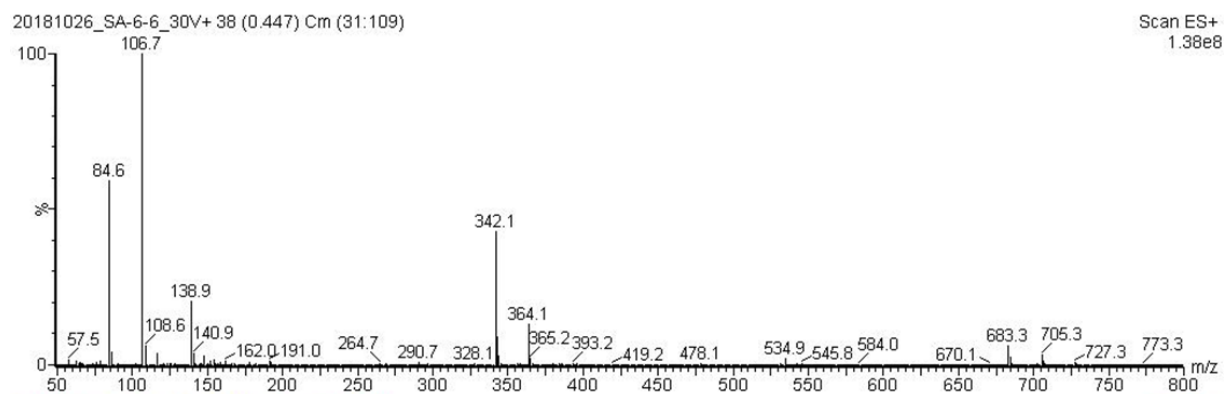


Figure S6. ESI-MS spectrum of magnoflorine (2).

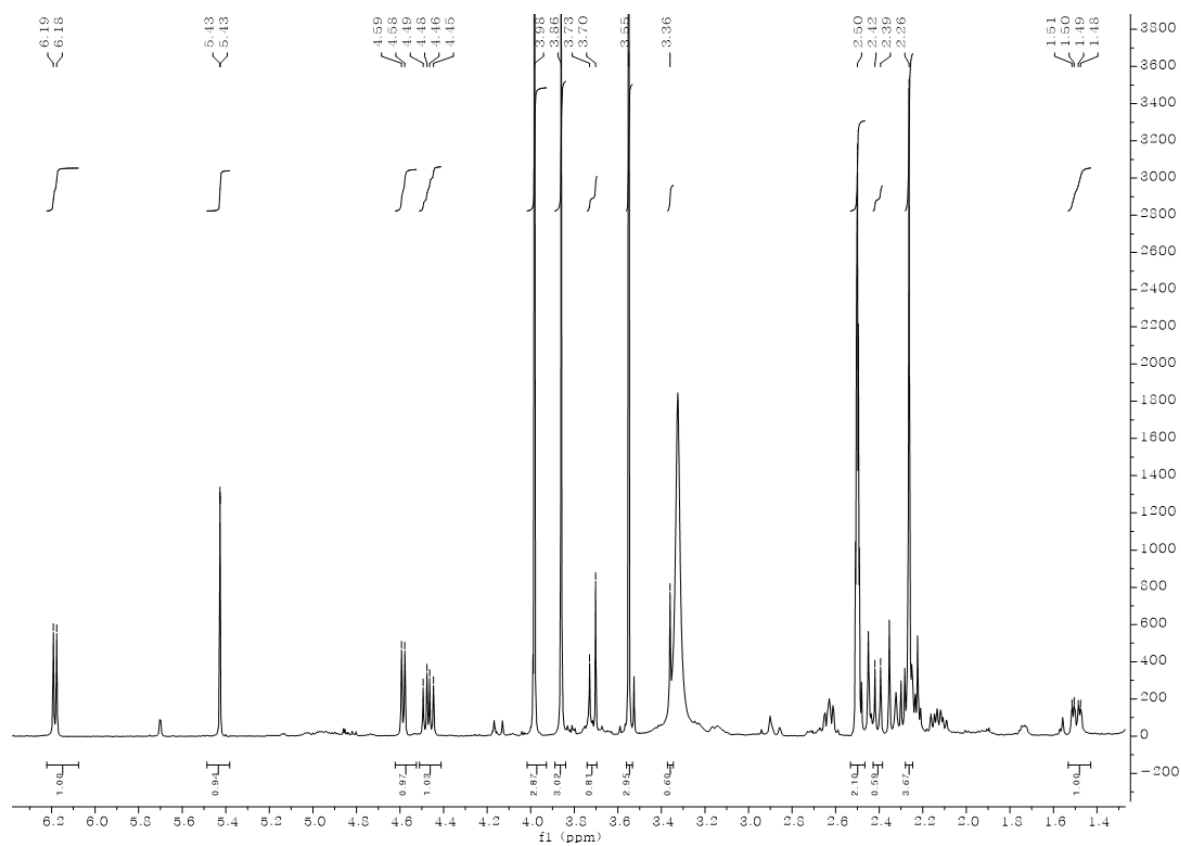


Figure S7. ¹H-NMR spectrum of acutumine (3) (400 MHz, DMSO-d₆).

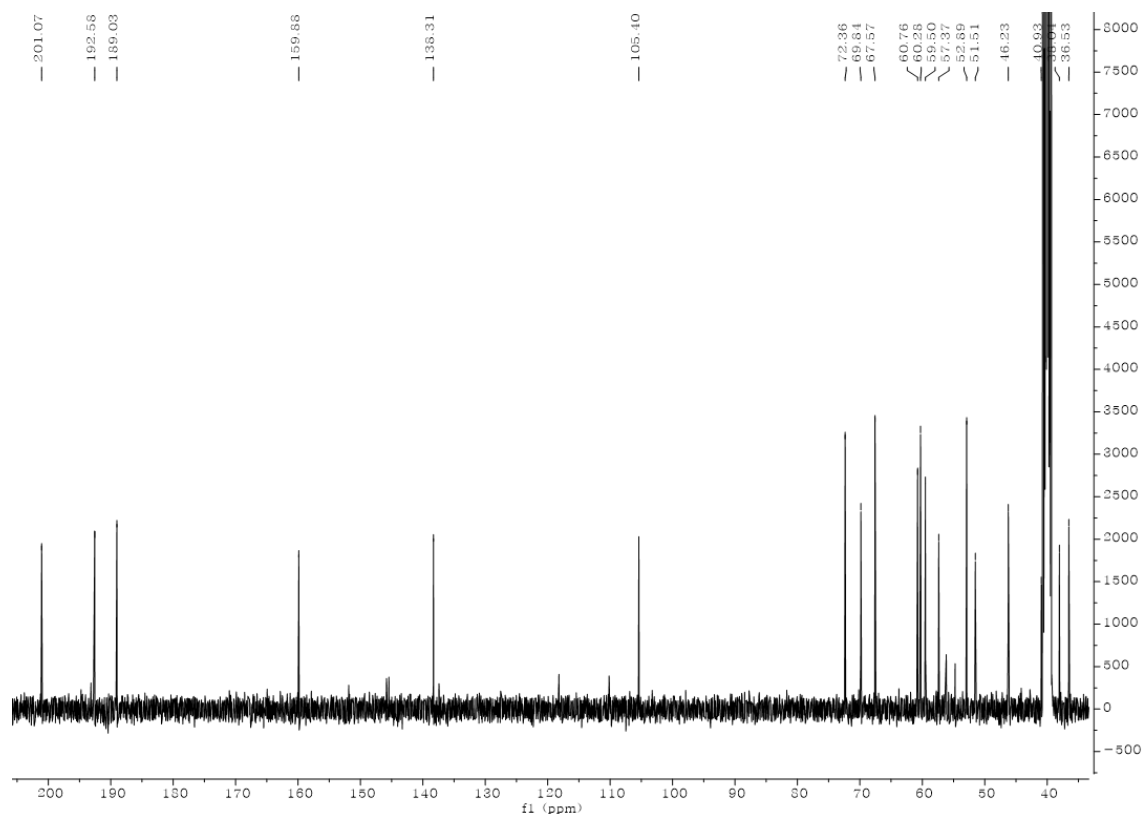


Figure S8. ¹³C-NMR spectrum of acutumine (3) (100 MHz, DMSO-d₆).

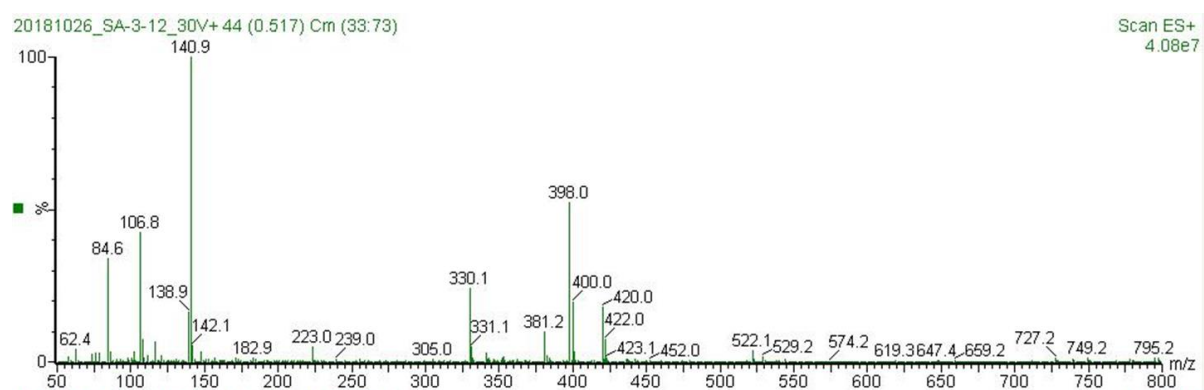


Figure S9. ESI-MS spectrum of acutumine (3).

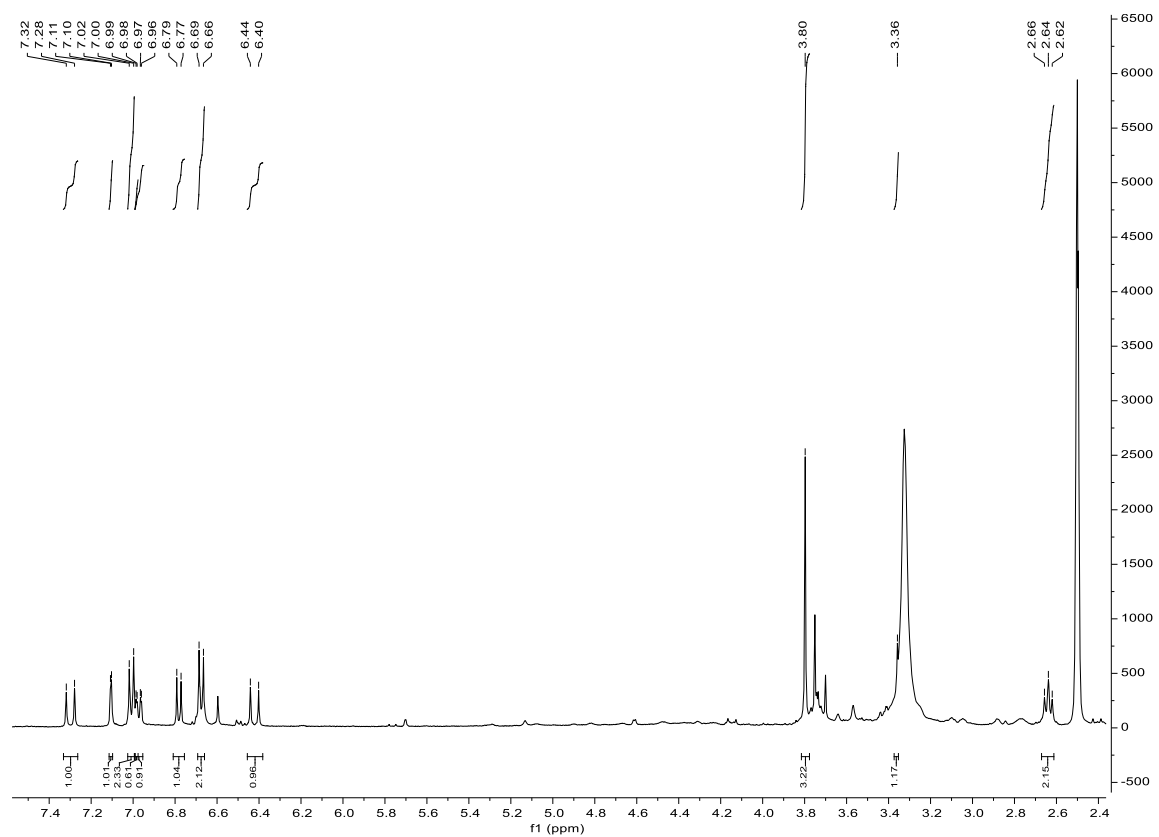


Figure S10. ¹H-NMR spectrum of N-feruloyltyramine (4) (400 MHz, DMSO-d₆).

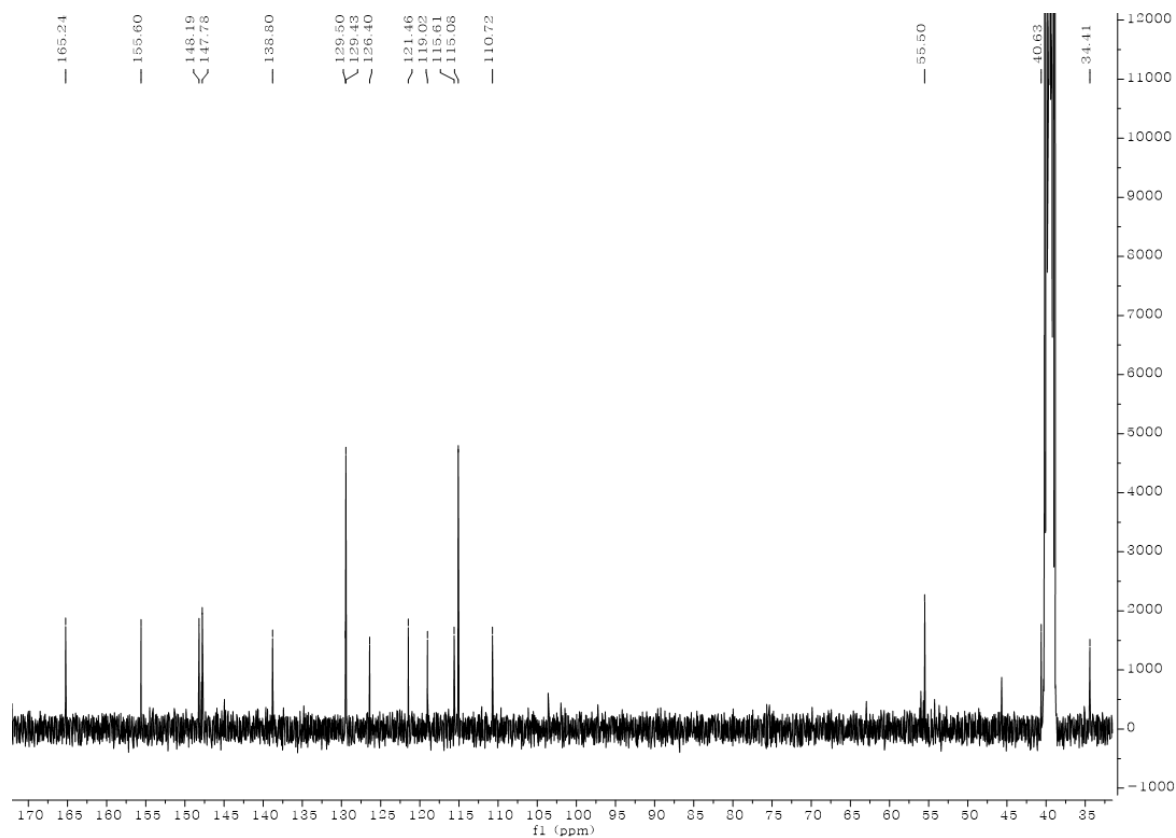


Figure S11. ¹³C-NMR spectrum of N-feruloyltyramine (4) (100 MHz, DMSO-d₆).

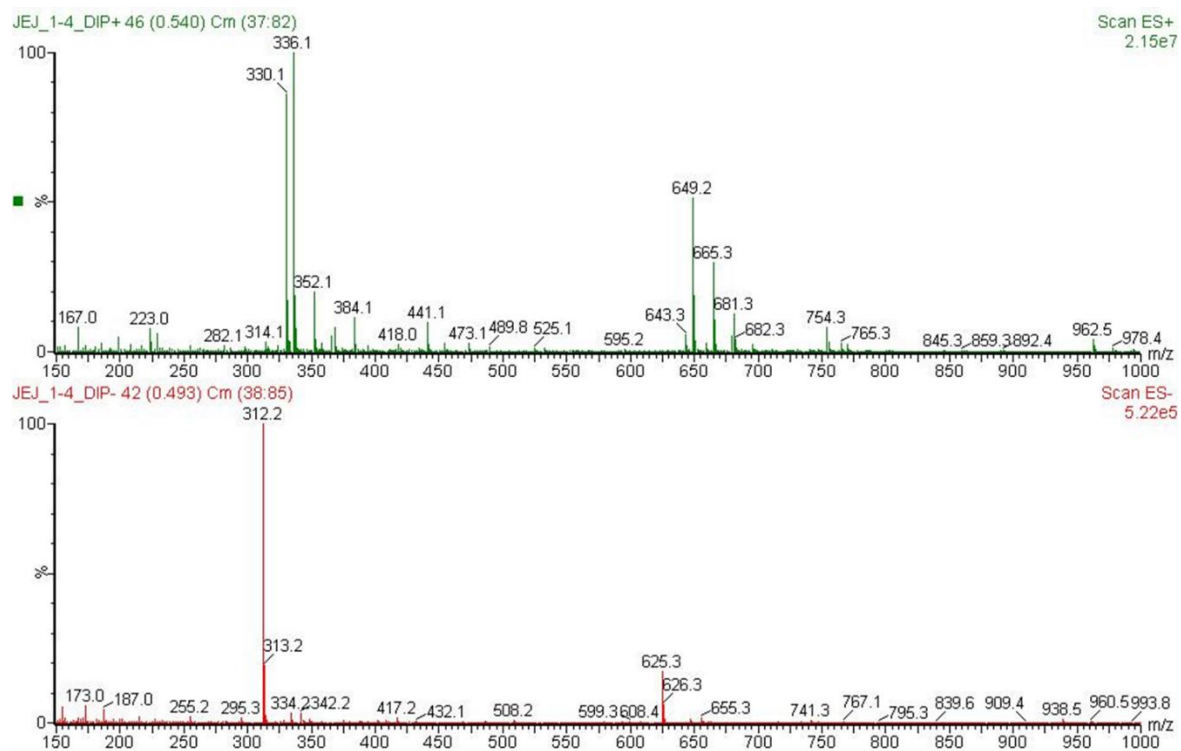


Figure S12. ESI-MS spectrum of N-feruloyltyramine (4).

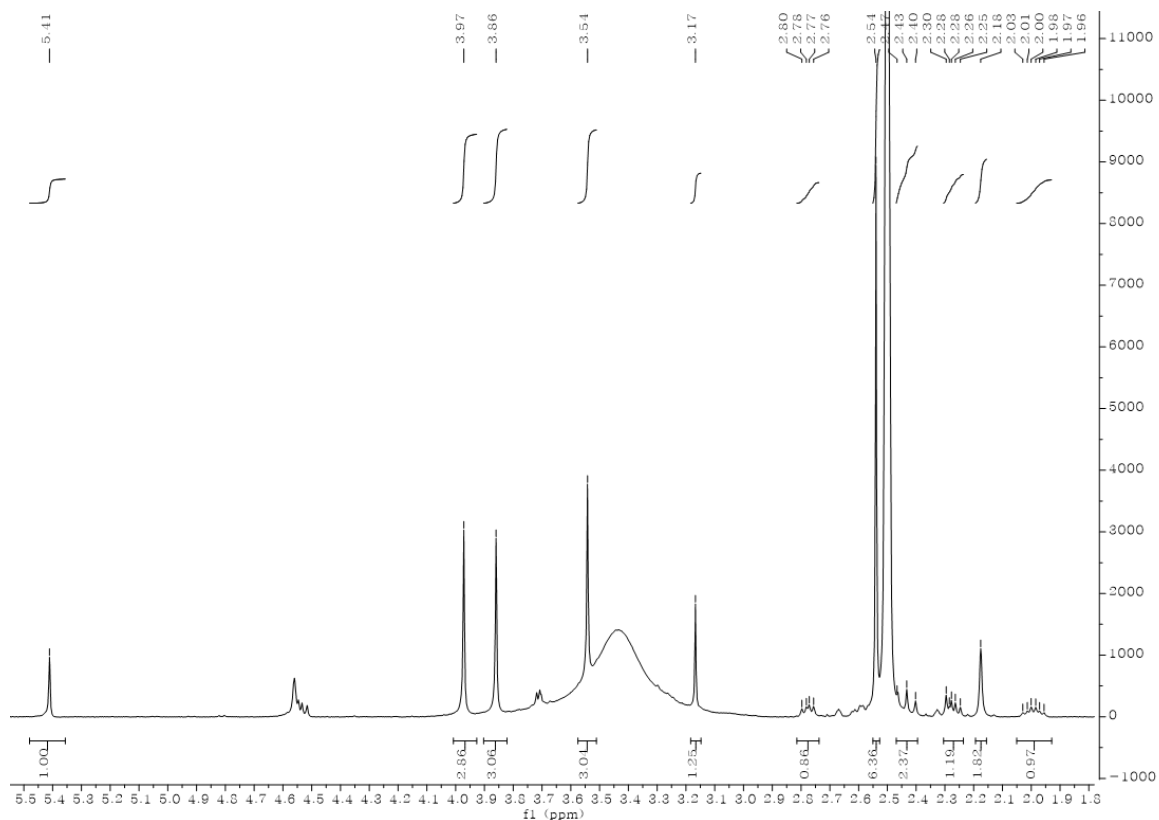


Figure S13. ¹H-NMR spectrum of dauricumine (5) (400 MHz, DMSO-d₆).

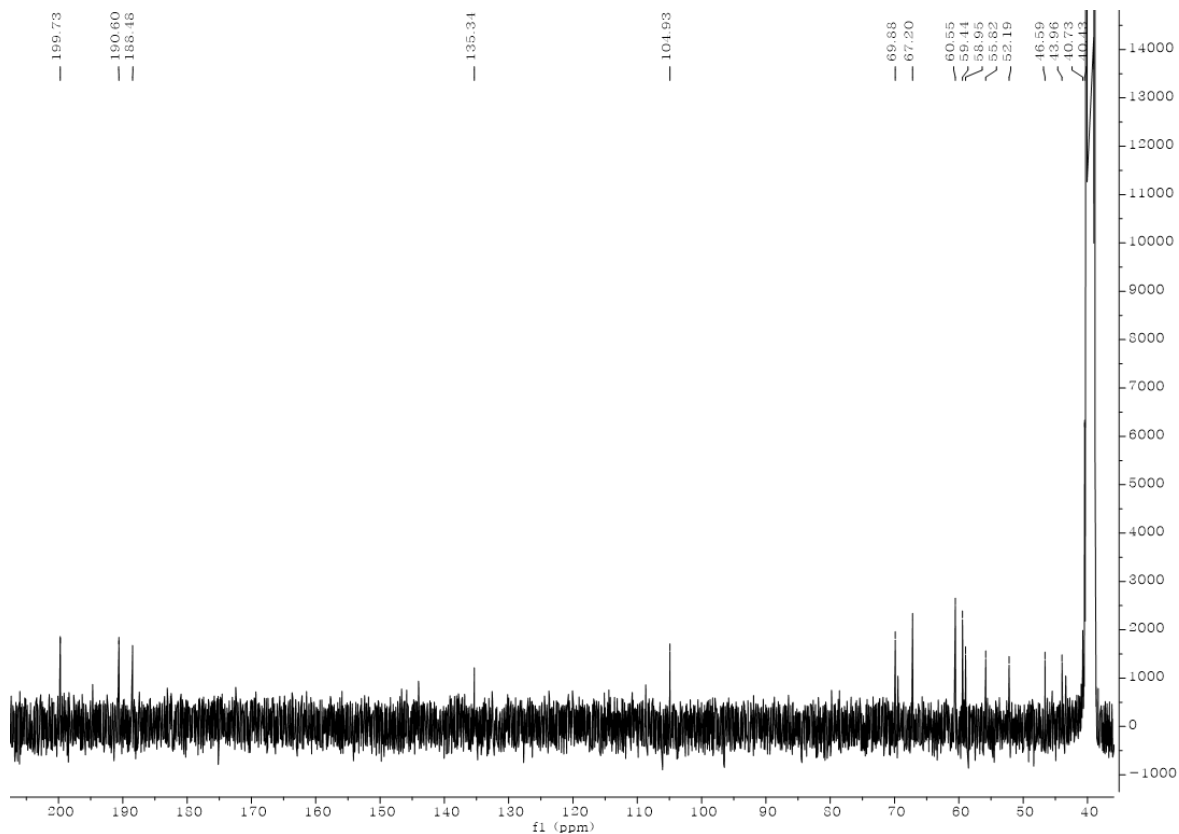


Figure S14. ¹³C-NMR spectrum of dauricumine (5) (100 MHz, DMSO-d₆).

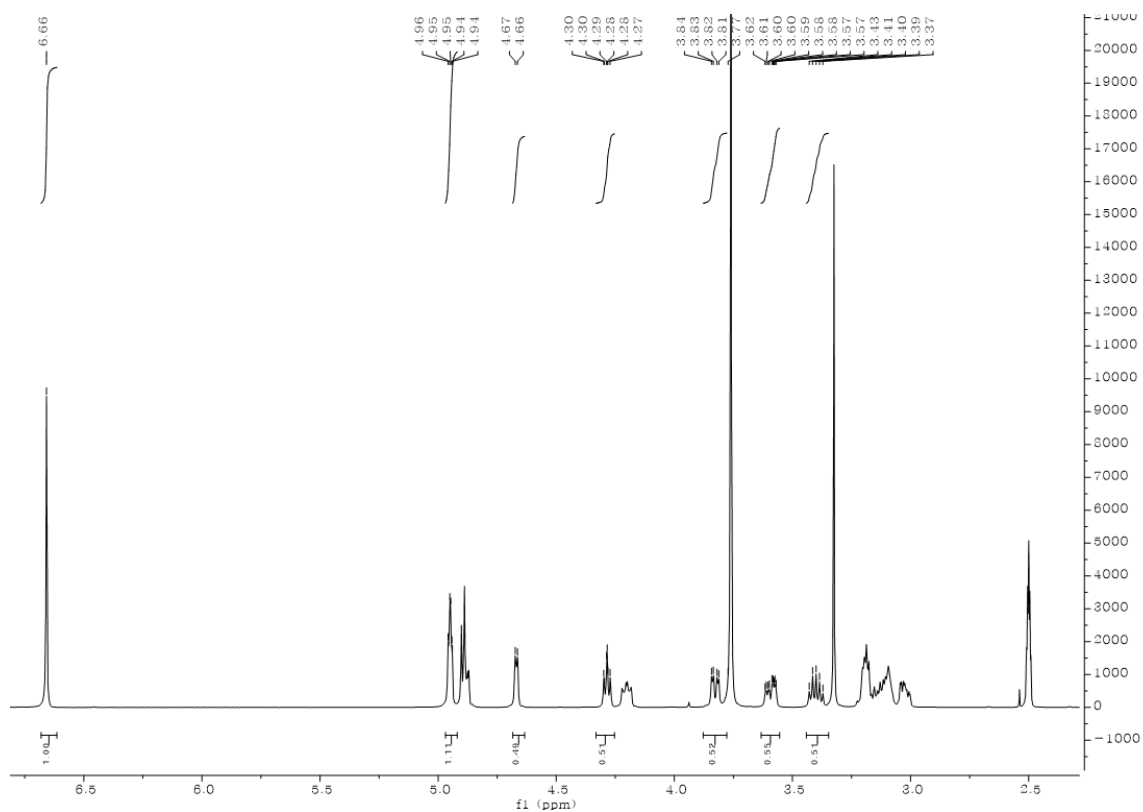


Figure S15. ¹H-NMR spectrum of liriodendrin (6) (400 MHz, DMSO-d₆).

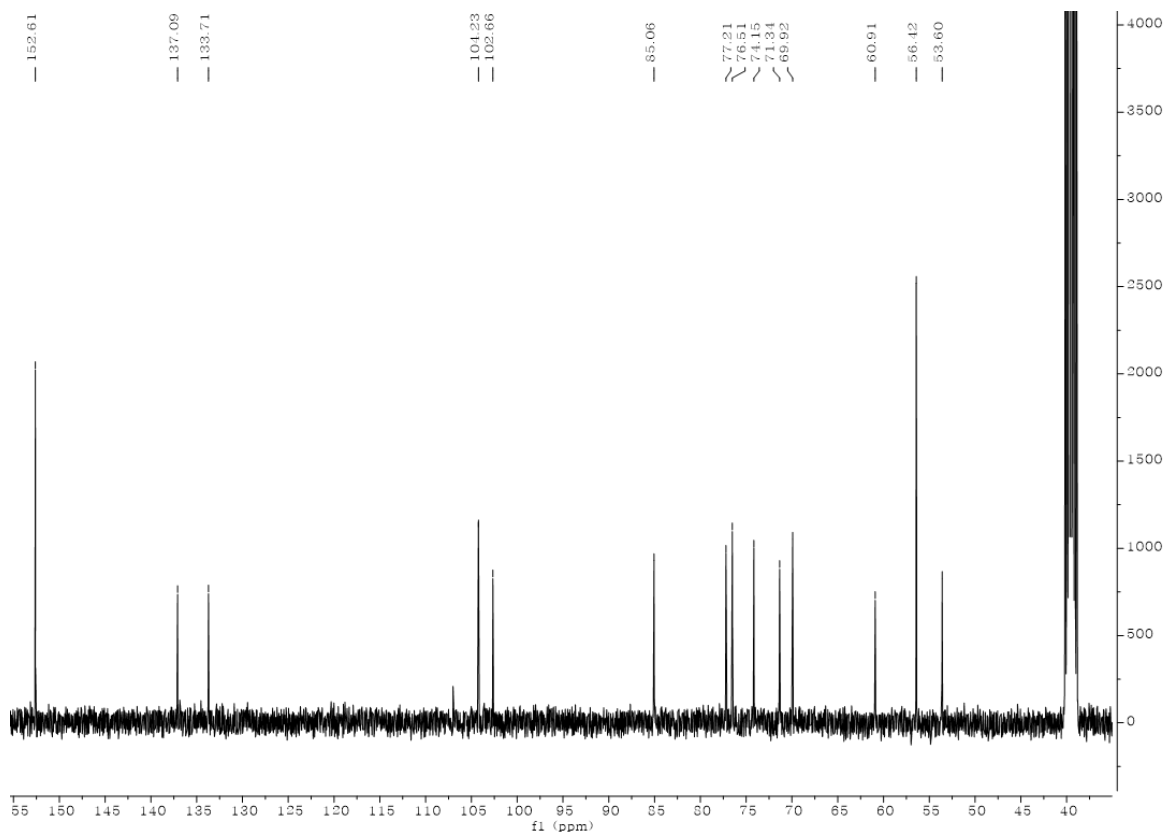


Figure S16. ¹³C-NMR spectrum of liriodendrin (6) (100 MHz, DMSO-d₆).

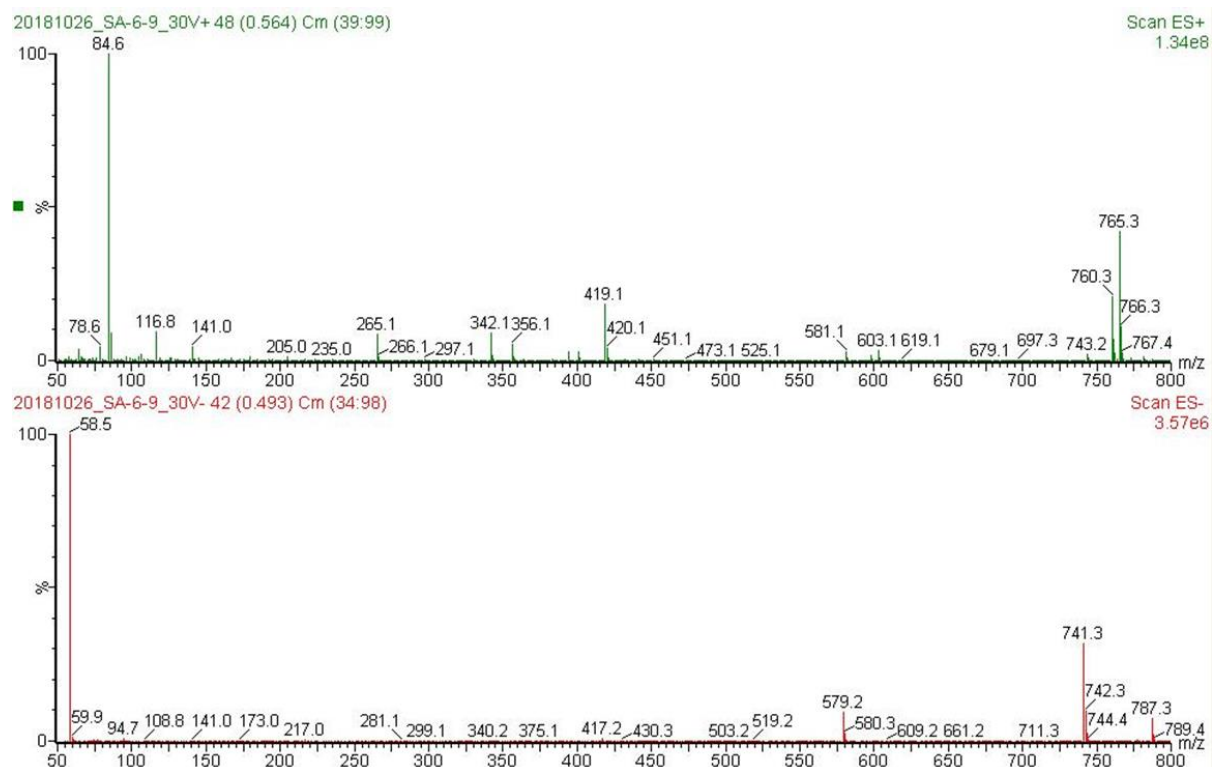


Figure S17. ESI-MS spectrum of liriodendrin (6).

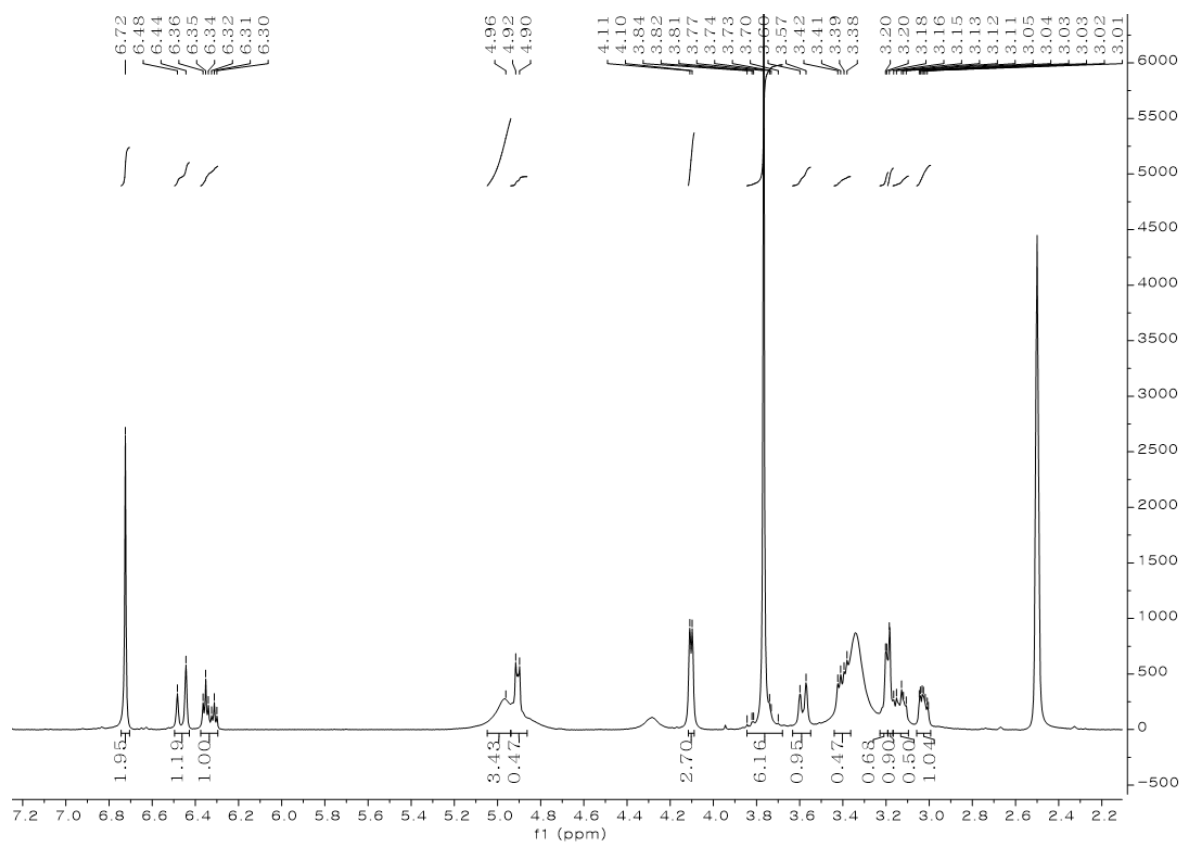


Figure S18. ¹H-NMR spectrum of syringin (7) (400 MHz, DMSO-d₆).

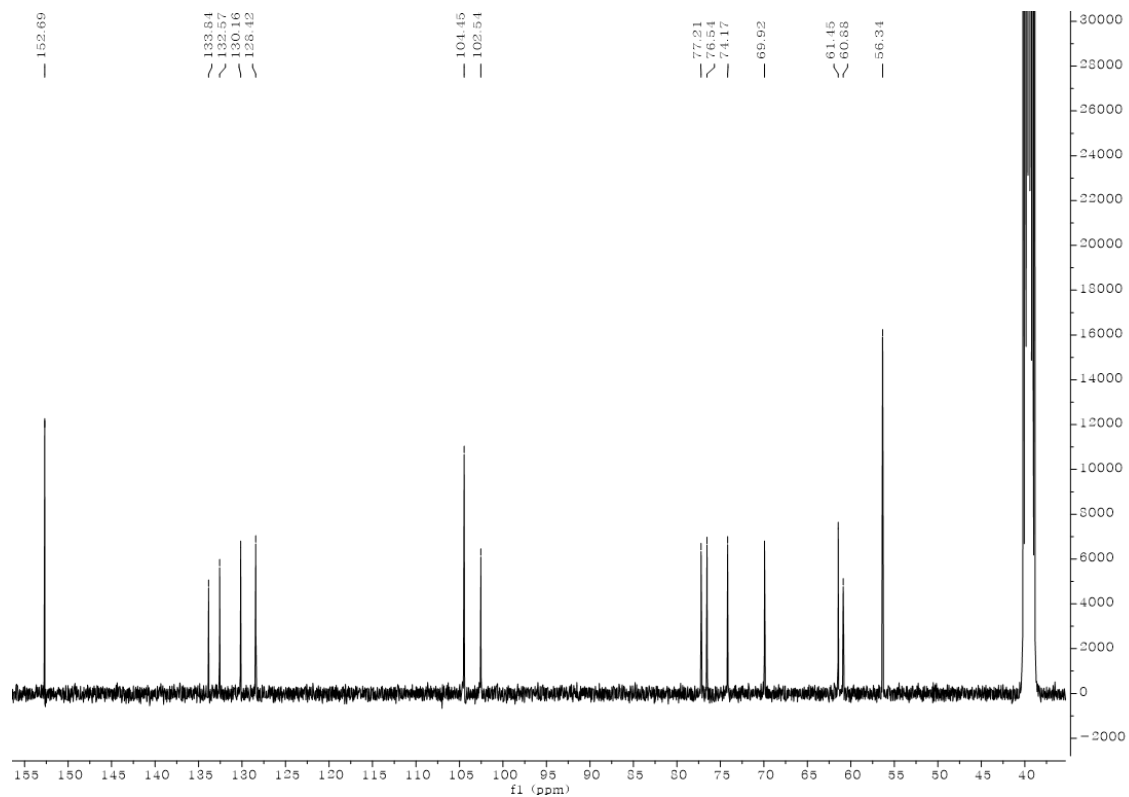


Figure S19. ¹³C-NMR spectrum of syringin (7) (100 MHz, DMSO-d₆).

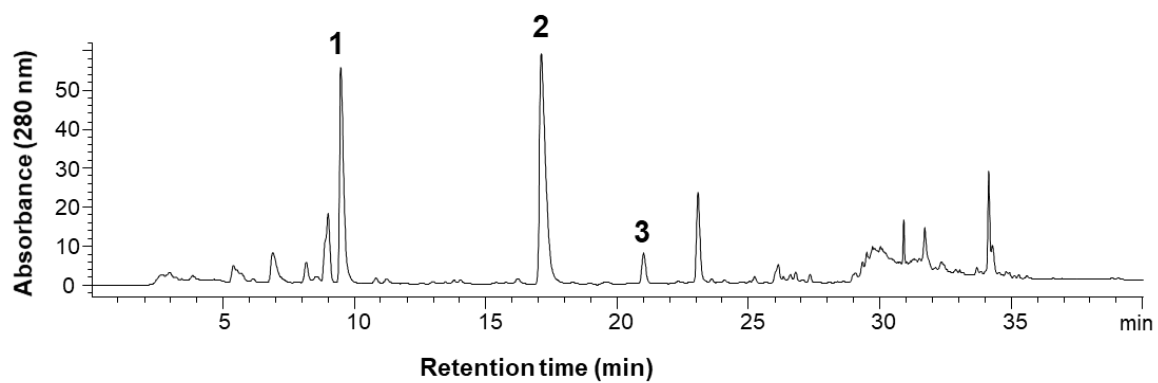


Figure S20. HPLC chromatogram of crude extract. Peak 1: sinomenine (1), peak 2: magnoflorine (2), and peak 3: acutumine (3).

Table S1. Retention time and calibration curves of compounds 1 - 3.

Compounds	Retention time (min)	Calibration equation	Correlation factor (R^2)
Sinomenine (1)	9.43	$Y = 14606x + 23.259$	0.9987
Magnoflorine (2)	16.21	$Y = 12110x + 3.9913$	0.9986
Acutumine (3)	21.05	$Y = 6781x + 9.432$	0.9956

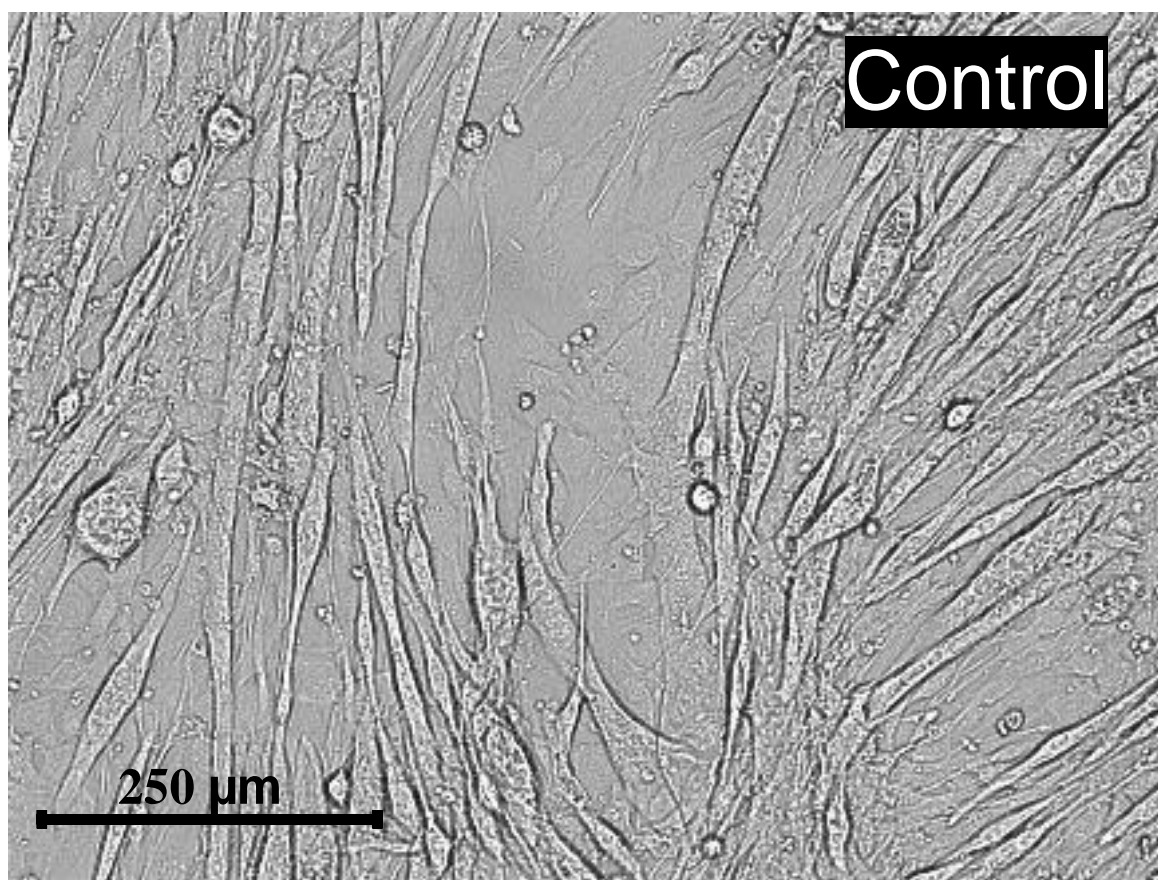


Figure S21. Photomicrographs of myotube cultures that were treated with vehicle alone.

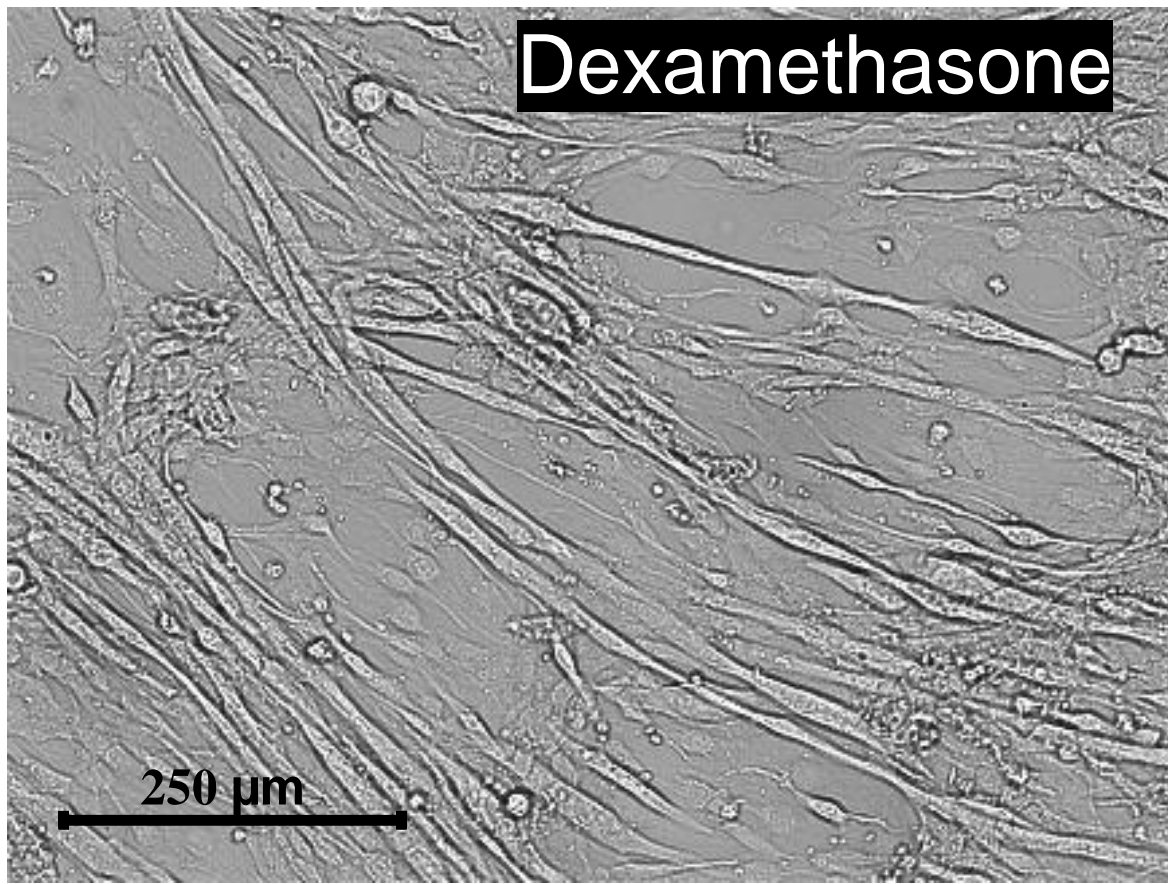


Figure S22. Photomicrographs of myotube cultures that were treated with 1 μM dexamethasone.

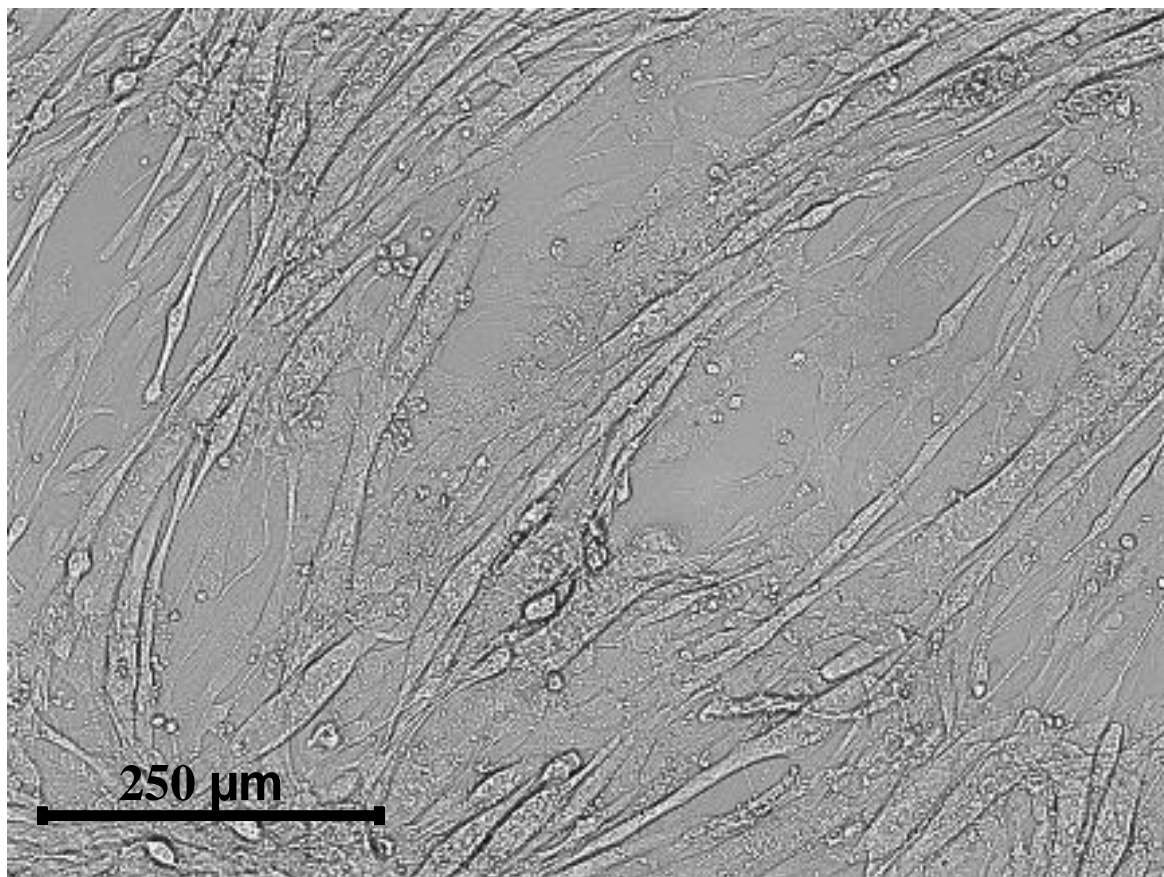


Figure S23. Photomicrographs of myotube cultures that were treated with a combination of dexamethasone (1 μ M) and *S. acutum* extract (30 μ g/mL).

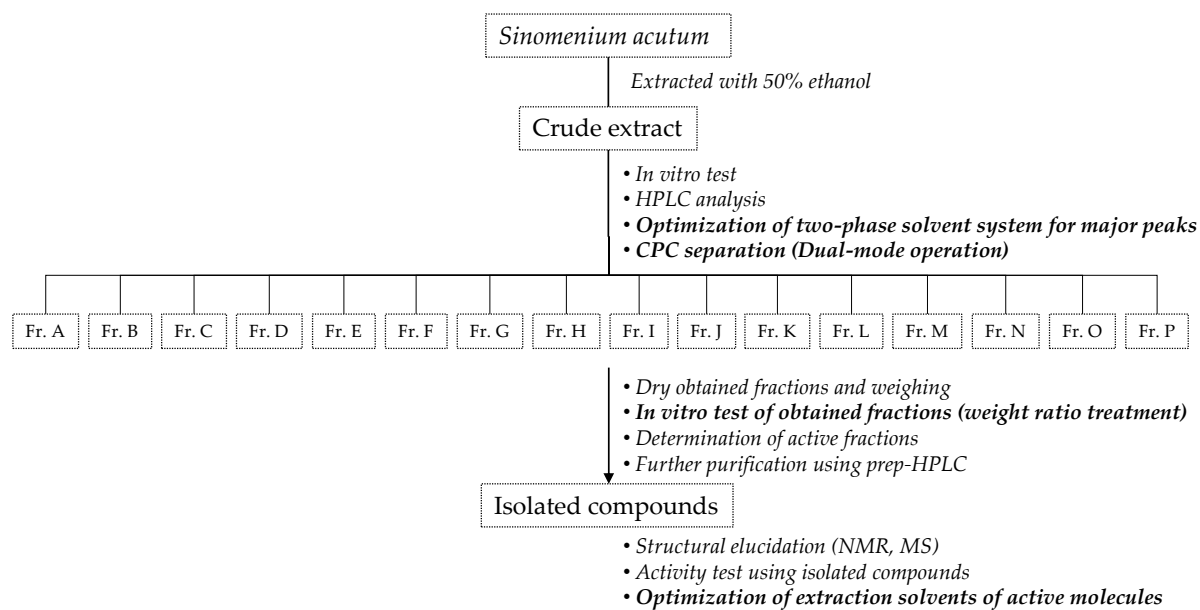


Figure S24: Summary of purification process using CPC from *S. acutum* extract.