

SUPPLEMENTARY MATERIAL

Xanthones from the green branch of *Garcinia dulcis*

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Abstract

Two new prenylated xanthones named dulcisxanthone H and dulcisxanthone I, along with garciniaxanthone C were isolated from the dichloromethane extract of the green branch of *Garcinia dulcis*. Their structures were elucidated by analysis of 1D and 2D NMR spectral data. Their antibacterial activities were also examined.

Keywords: Clusiaceae; *Garcinia dulcis*; prenylated xanthones, antibacterial

Table S1. The ^{13}C , ^1H NMR and HMBC spectral data (CDCl_3) of dulcisxanthone H (**1**).

| Positions | δ_{C} | δ_{H} (mult., J_{Hz}) | HMBC |
|-----------|---------------------|---|----------------------|
| 1 | 155.2 | - | - |
| 2 | 107.0 | 6.49 (s) | C-1, C-4, C-9a, C-4' |
| 3 | 128.7 | - | - |
| 4 | 131.8 | - | - |
| 4a | 142.5 | - | - |
| 5 | 142.5 | - | - |
| 6 | 135.3 | - | - |
| 7 | 125.1 | 7.15 (d, $J = 8.4$) | C-5, C-8a, C-1" |
| 8 | 115.8 | 7.68 (d, $J = 8.4$) | C-6, C-9, C-10a |
| 8a | 119.1 | - | - |
| 9 | 181.8 | - | - |

Table S1. The ^{13}C , ^1H NMR and HMBC spectral data (CDCl_3) of dulcisxanthone H (**1**) (continued).

| Positions | δ_{C} | δ_{H} (mult., J_{Hz}) | HMBC |
|-------------------|---------------------|---|-------------------------------|
| 9a | 108.5 | - | - |
| 10a | 144.4 | - | - |
| 2' | 77.1 | - | - |
| 3' | 135.9 | 5.91 (<i>d</i> , $J = 9.9$) | C-3, C-2', CH_3 -2' |
| 4' | 122.2 | 6.37 (<i>d</i> , $J = 9.9$) | C-2, C-3, C-4, C-2' |
| 1" | 28.8 | 3.50 (<i>d</i> , $J = 7.5$) | C-5, C-6, C-7, C-2", C-3" |
| 2" | 120.9 | 5.35 (<i>br t</i> , $J = 7.5$) | - |
| 3" | 133.9 | - | - |
| 4" | 25.8 | 1.76 (<i>s</i>) | C-2", C-3", C-5" |
| 5" | 17.9 | 1.76 (<i>s</i>) | C-2", C-3", C-4" |
| 1-OH | - | 12.34 (<i>s</i>) | C-1, C-2, C-9a |
| 2'- CH_3 | 27.4 | 1.53 (<i>s</i>) | C-2', C-3', CH_3 -2' |

Table S2. The ^{13}C , ^1H NMR and HMBC spectral data (acetone- d_6) of dulcisxanthone I (**2**).

| Positions | δ_{C} | δ_{H} (mult., J_{Hz}) | HMBC |
|--------------------|---------------------|---|-----------------------|
| 1 | 150.2 | - | - |
| 2 | 122.5 | - | - |
| 3 | 124.3 | 7.21 (s) | C-1, C-4, C-4a, C-1' |
| 4 | 136.6 | - | - |
| 4a | 141.8 | - | - |
| 5 | 92.7 | 6.55 (d, $J = 2.4$) | C-6, C-7, C-8a, C-10a |
| 6 | 167.6 | - | - |
| 7 | 97.2 | 6.36 (d, $J = 2.4$) | C-5, C-6, C-8, C-8a |
| 8 | 163.0 | - | - |
| 8a | 103.5 | - | - |
| 9 | 185.1 | - | - |
| 9a | 107.1 | - | - |
| 10a | 157.9 | - | - |
| 1' | 26.5 | 3.33 (d, $J = 7.5$) | C-1, C-2', C-3' |
| 2' | 121.9 | 5.33 (br t, $J = 7.5$) | - |
| 3' | 132.6 | - | - |
| 4' | 24.9 | 1.74 (s) | C-2', C-3', C-5' |
| 5' | 16.9 | 1.74 (s) | C-2', C-3', C-4' |
| 1-OH | - | 11.46 (s) | C-1, C-2, C-9a |
| 4-OH | - | 8.65 (s) | - |
| 8-OH | - | 12.02 (s) | - |
| 6-OCH ₃ | 55.7 | 3.97 (s) | C-6 |

Table S3. The ^{13}C , ^1H NMR and HMBC spectral data (acetone- d_6) of garciniaxanthone C (**3**).

| Positions | δ_{C} | δ_{H} (mult., J_{Hz}) | HMBC |
|-----------|---------------------|---|----------------------|
| 1 | 153.5 | - | - |
| 2 | 110.0 | 6.59 (s) | C-1, C-3, C-9a, C-1' |
| 3 | 134.8 | - | - |
| 4 | 138.1 | - | - |
| 4a | 142.7 | - | - |
| 5 | 143.2 | - | - |
| 6 | 135.2 | - | - |
| 7 | 125.1 | 7.24 (d, $J = 8.4$) | C-5, C-8a, C-1" |
| 8 | 115.2 | 7.64 (d, $J = 8.4$) | C-6, C-9, C-10a |
| 8a | 119.2 | - | - |
| 9 | 182.0 | - | - |
| 9a | 106.7 | - | - |
| 10a | 144.6 | - | - |
| 1' | 28.7 | 3.47 (d, $J = 7.5$) | C-2, C-4, C-2', C-3' |
| 2' | 121.3 | 5.36 (br t, $J = 7.5$) | C-4', C-5' |
| 3' | 133.2 | - | - |
| 4' | 25.1 | 1.75 (s) | C-2', C-3', C-5' |
| 5' | 17.1 | 1.75 (s) | C-2', C-3', C-4' |
| 1" | 28.5 | 3.52 (d, $J = 7.5$) | C-5, C-7, C-2", C-3" |
| 2" | 121.4 | 5.36 (br t, $J = 7.5$) | C-4", C-5" |
| 3" | 133.1 | - | - |
| 4" | 25.1 | 1.74 (s) | C-2", C-3", C-5" |
| 5" | 17.1 | 1.76 (s) | C-2", C-3", C-4" |
| 1-OH | - | 11.96 (s) | C-1, C-2, C-9a |

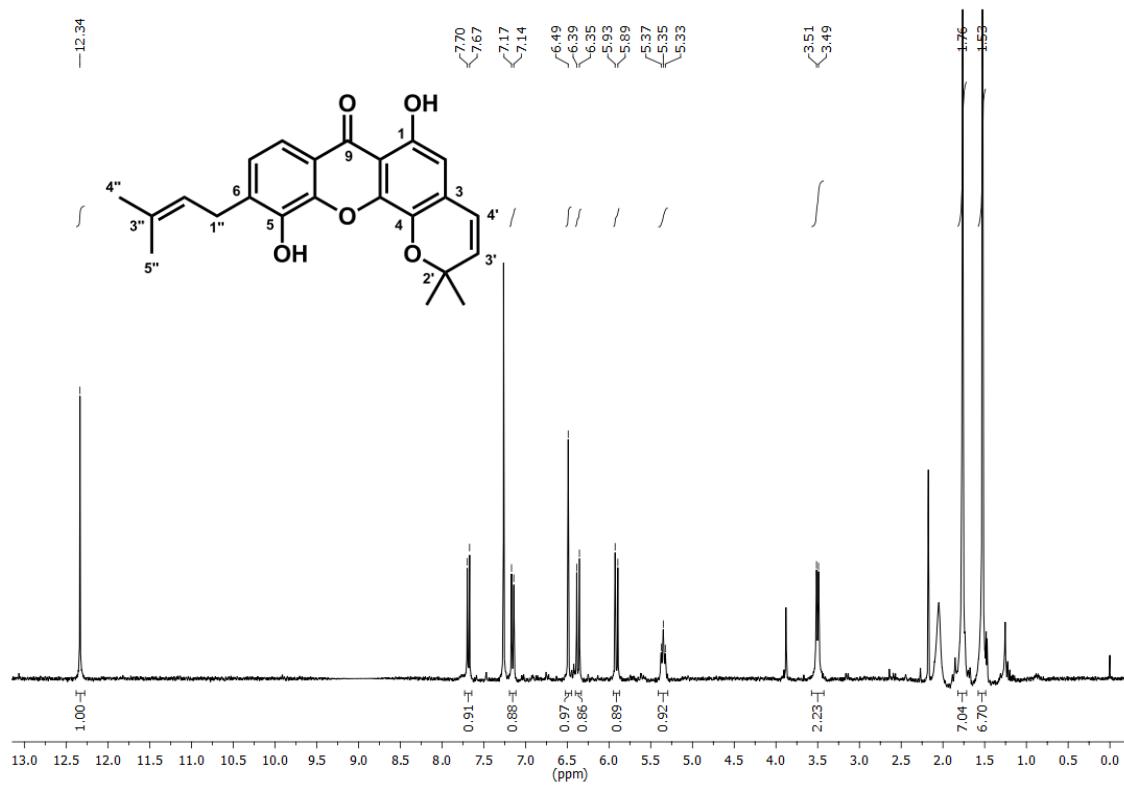


Figure S1. ^1H NMR (CDCl_3 , 300 MHz) spectrum of dulcisxanthone H (**1**).

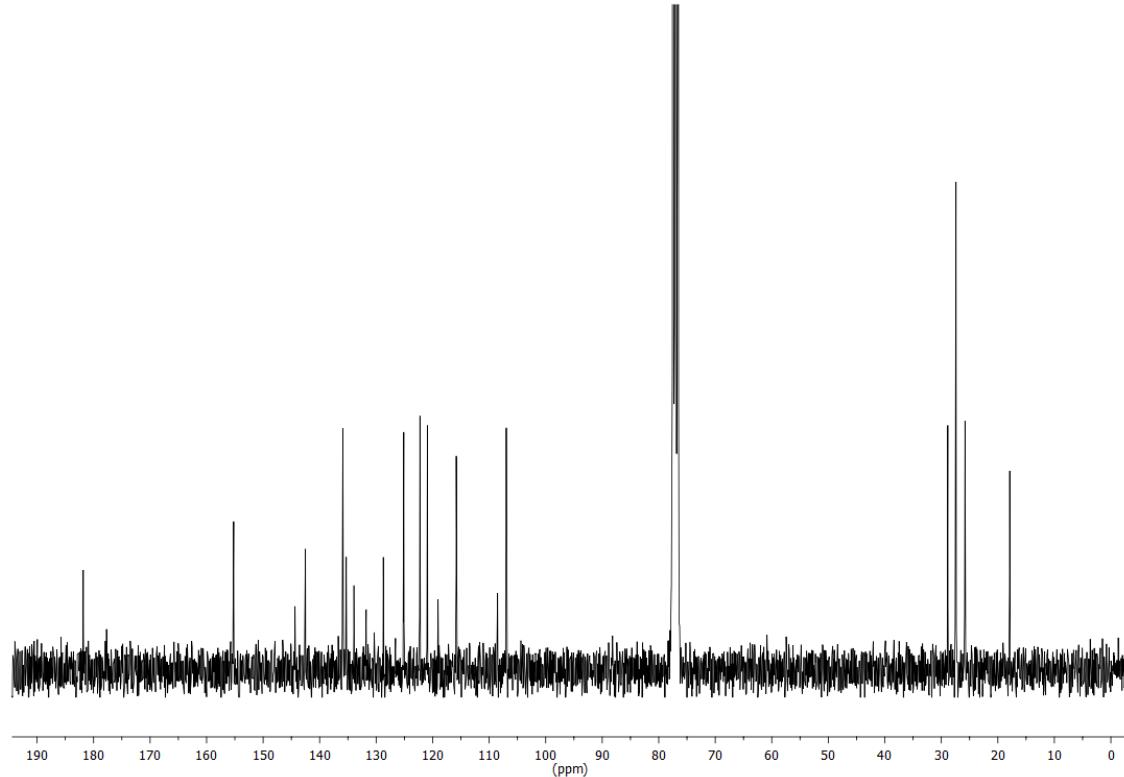


Figure S2. ^{13}C NMR (CDCl_3 , 75 MHz) spectrum of dulcisxanthone H (**1**).

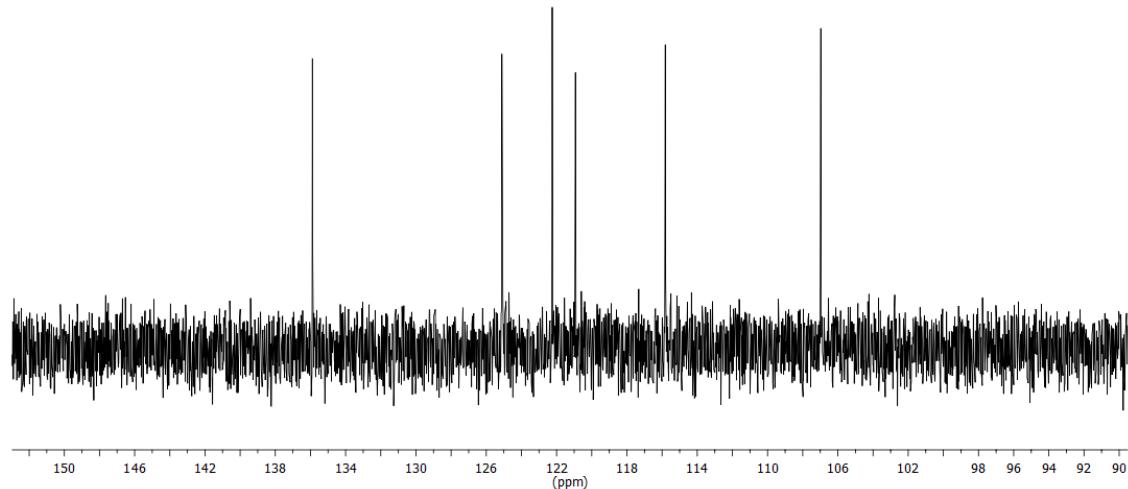


Figure S3. DEPT 90° (CDCl_3) spectrum of dulcisxanthone H (1).

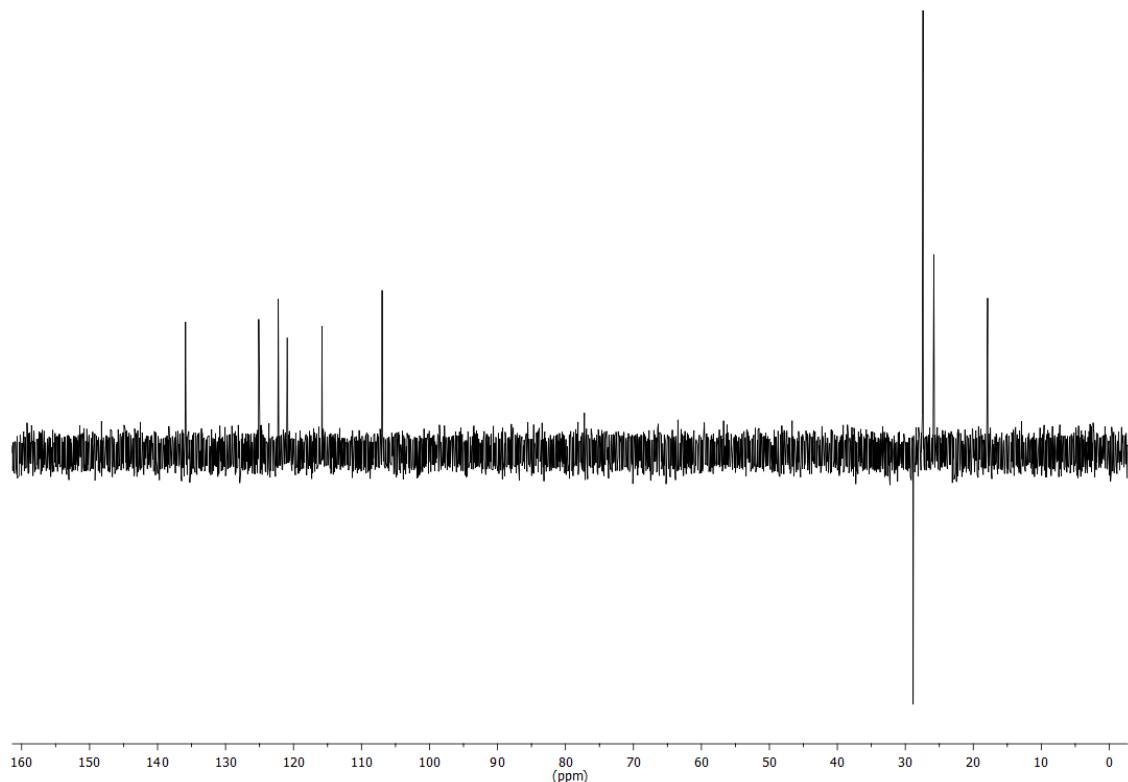


Figure S4. DEPT 135° (CDCl_3) spectrum of dulcisxanthone H (1).

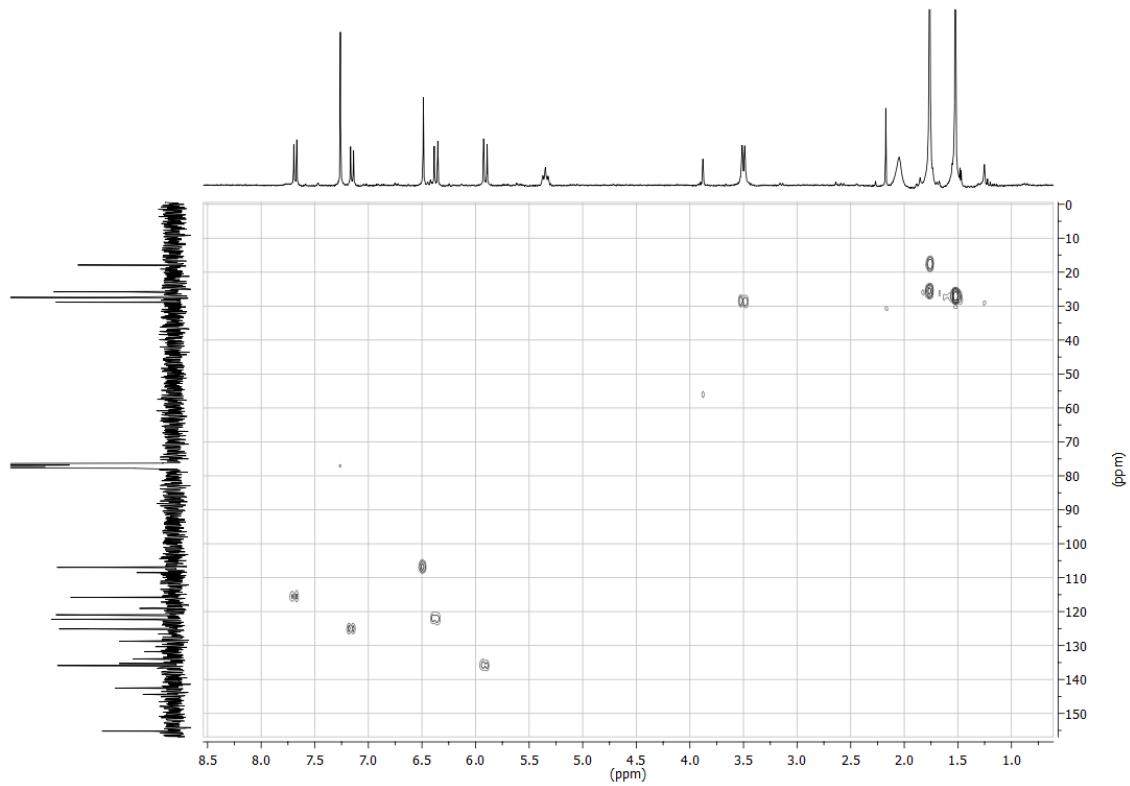


Figure S5. 2D HMQC (CDCl_3) spectrum of dulcisxanthone H (**1**).

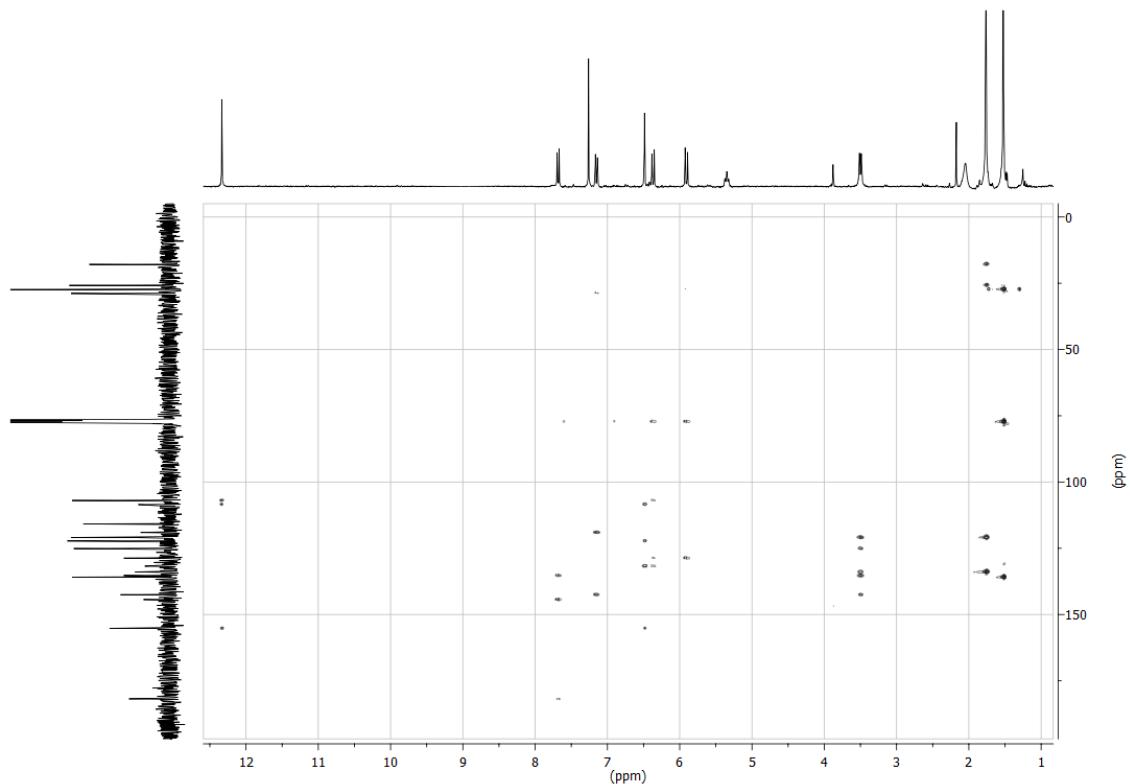


Figure S6. 2D HMBC (CDCl_3) spectrum of dulcisxanthone H (1).

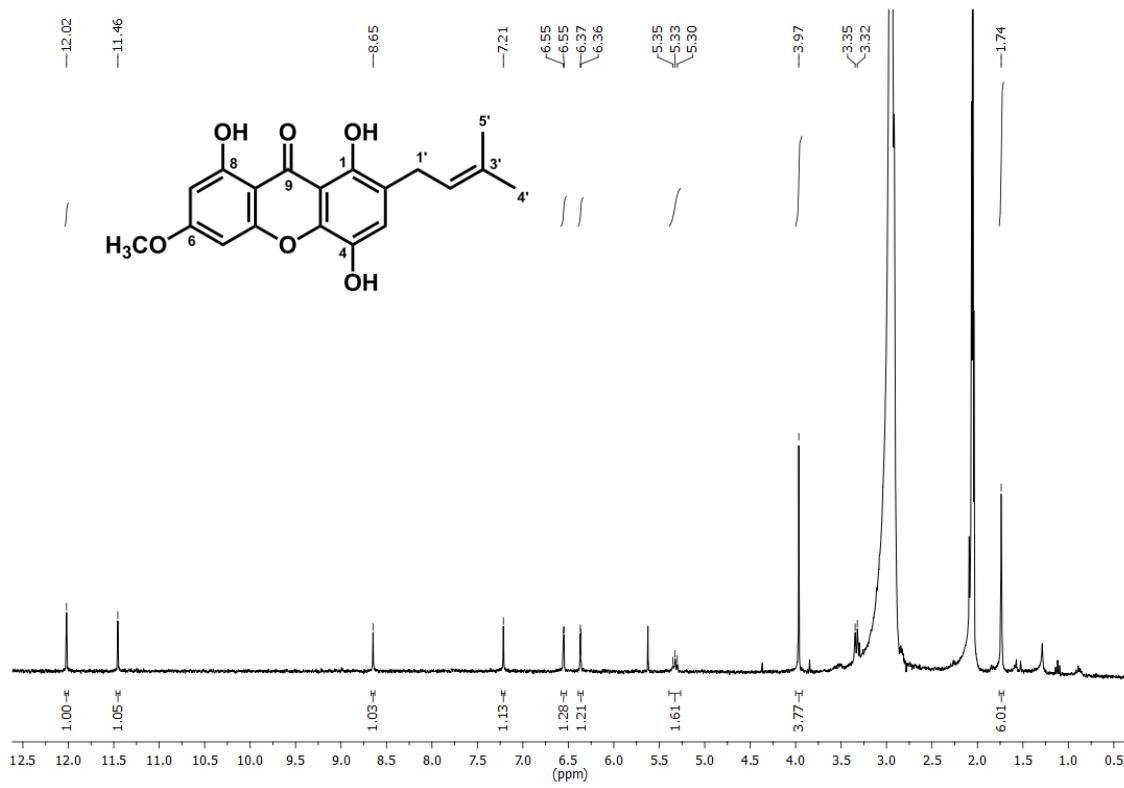


Figure S7. ^1H NMR (acetone- d_6 , 300 MHz) spectrum of dulcisxanthone I (2).

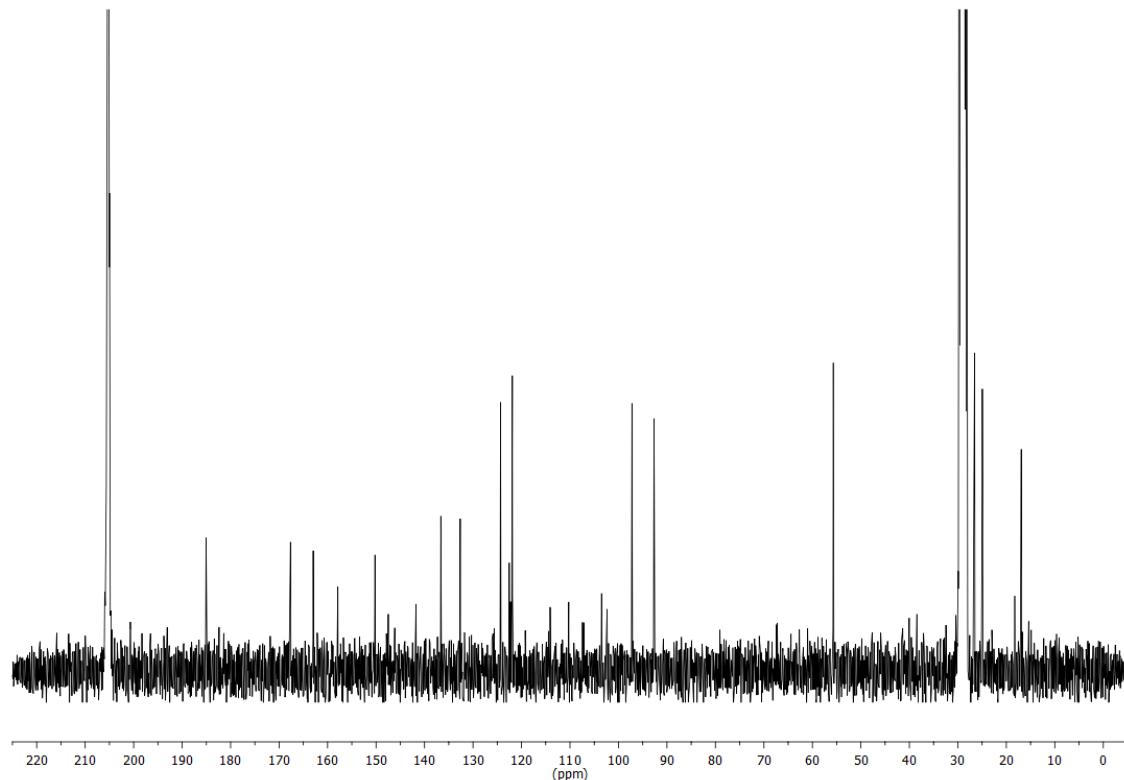


Figure S8. ^{13}C NMR (acetone- d_6 , 75 MHz) spectrum of dulcisxanthone I (2).

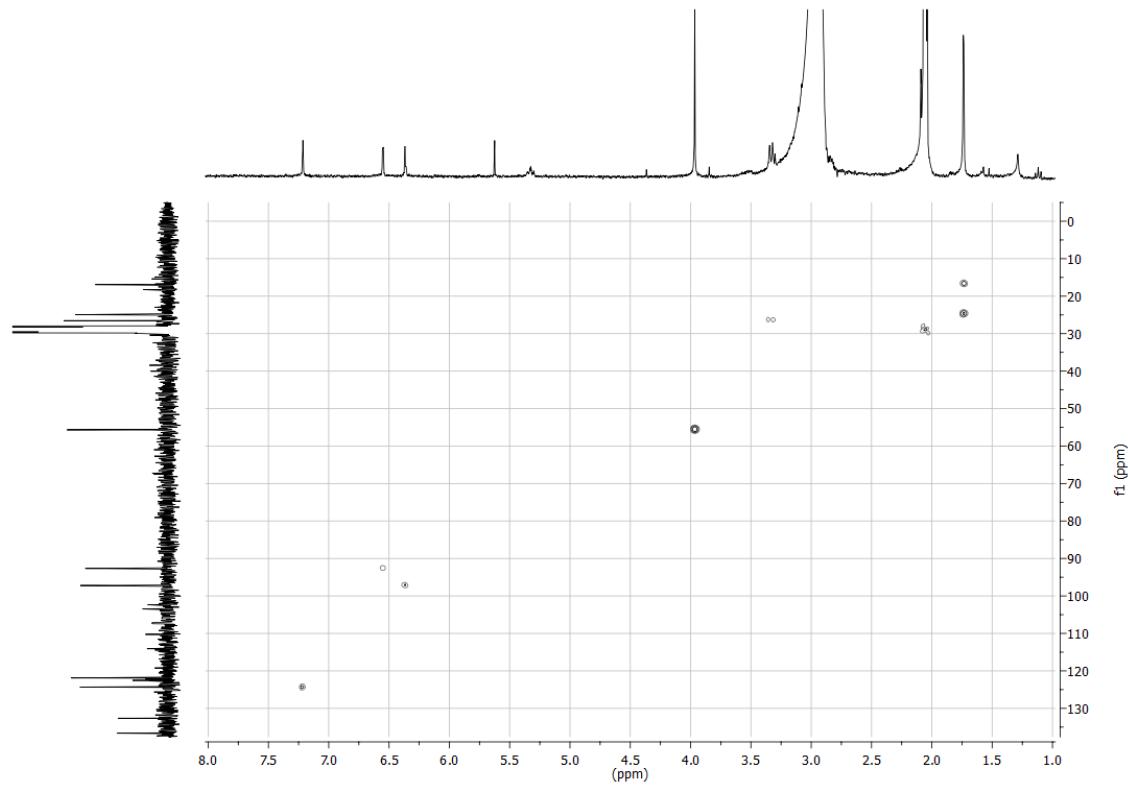


Figure S9. 2D HMQC (acetone- d_6) spectrum of dulcisxanthone I (2).

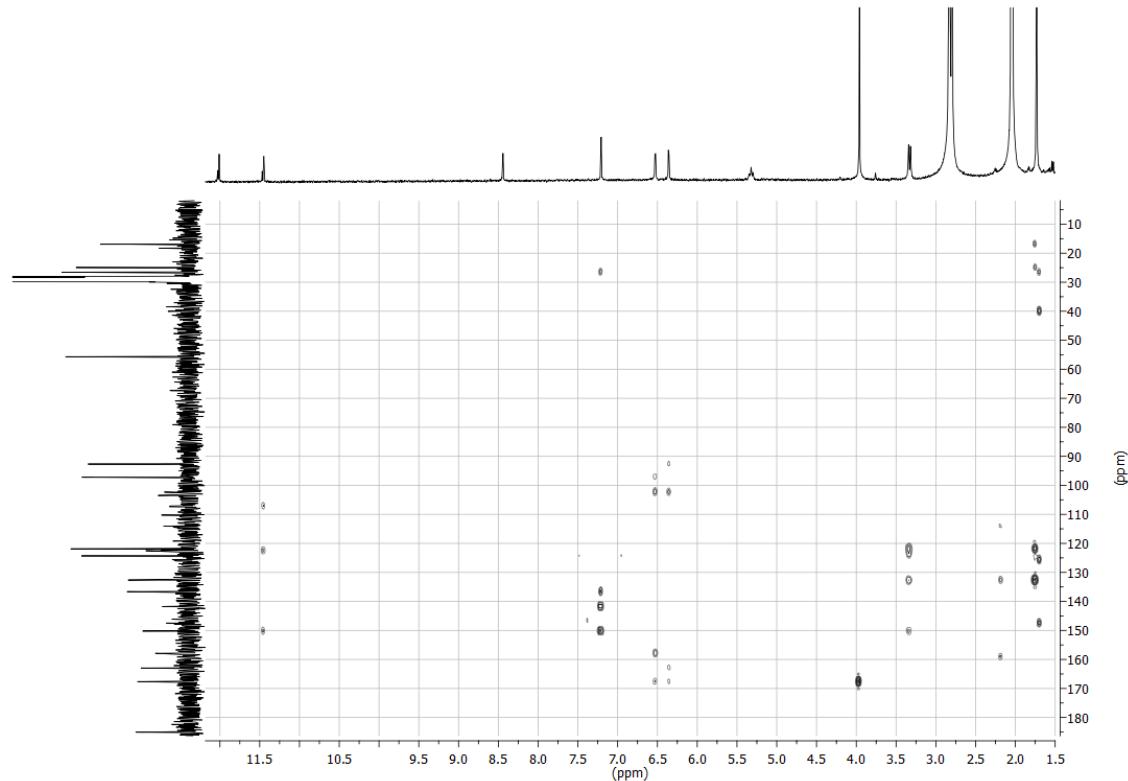


Figure S10. 2D HMBC (acetone- d_6) spectrum of dulcisxanthone I (2).

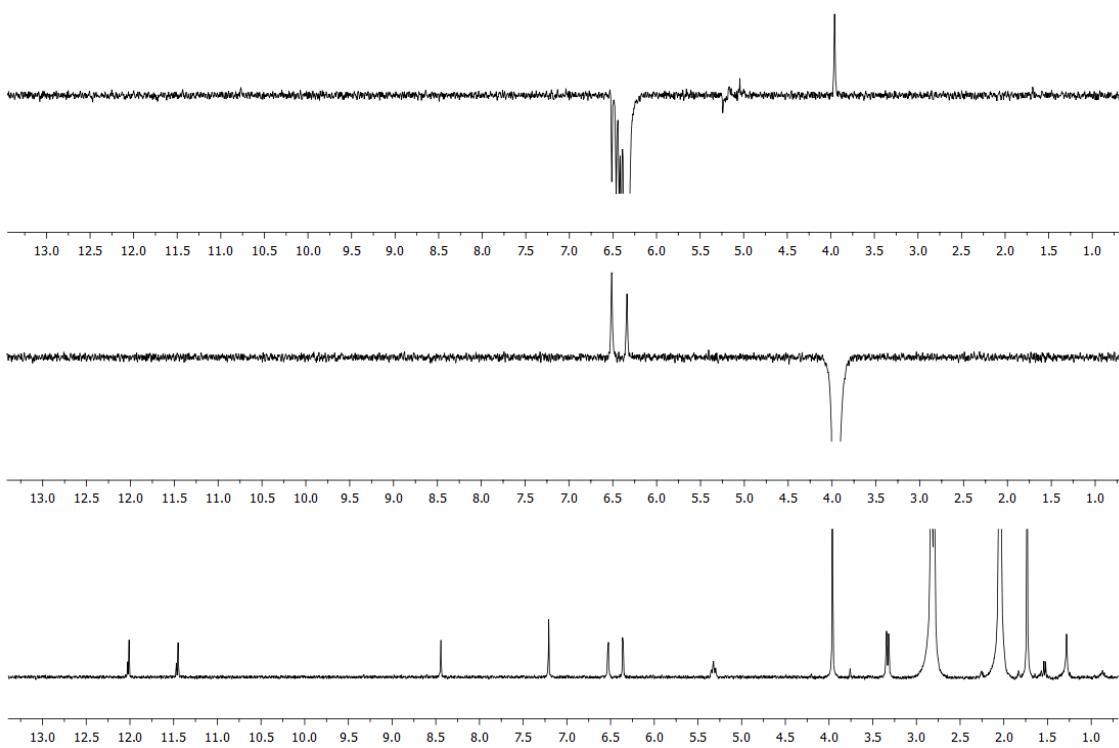


Figure S11. NOE (acetone-*d*₆) spectrum of dulcisxanthone I (2).

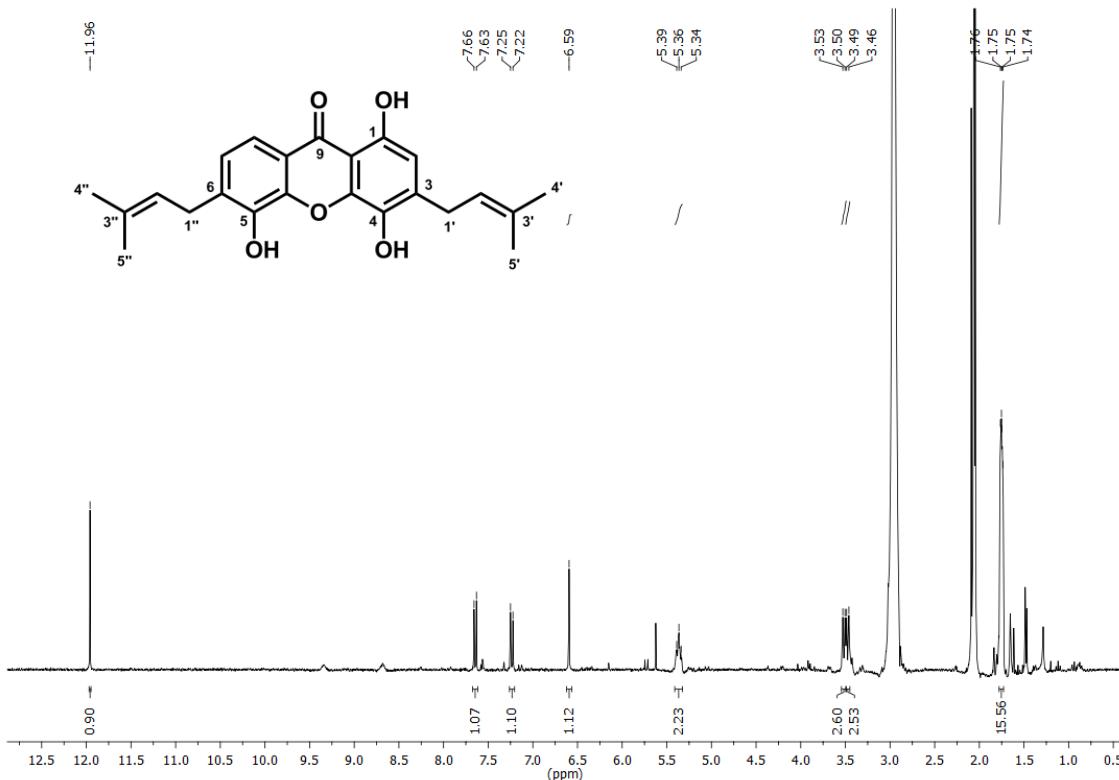


Figure S12. ¹H NMR (acetone-*d*₆, 300 MHz) spectrum of garciniaxanthone C (3).

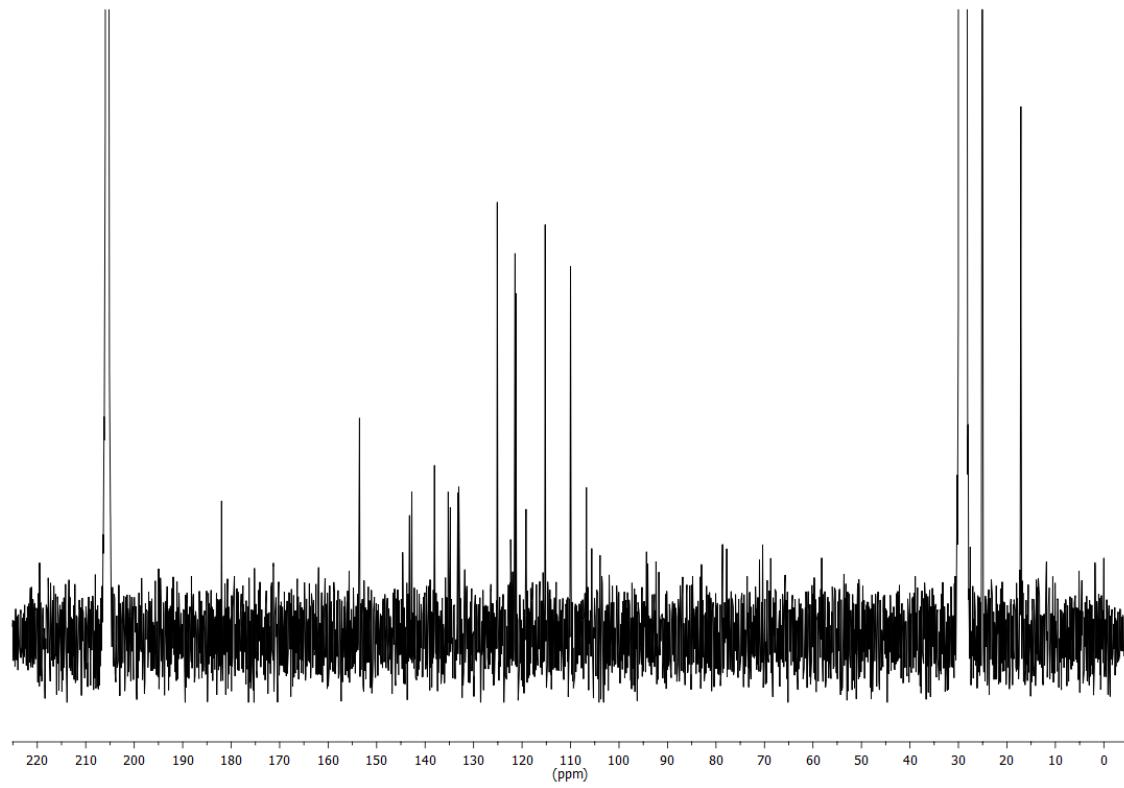


Figure S13. ^{13}C NMR (acetone- d_6 , 75 MHz) spectrum of garciniaxanthone C (3).

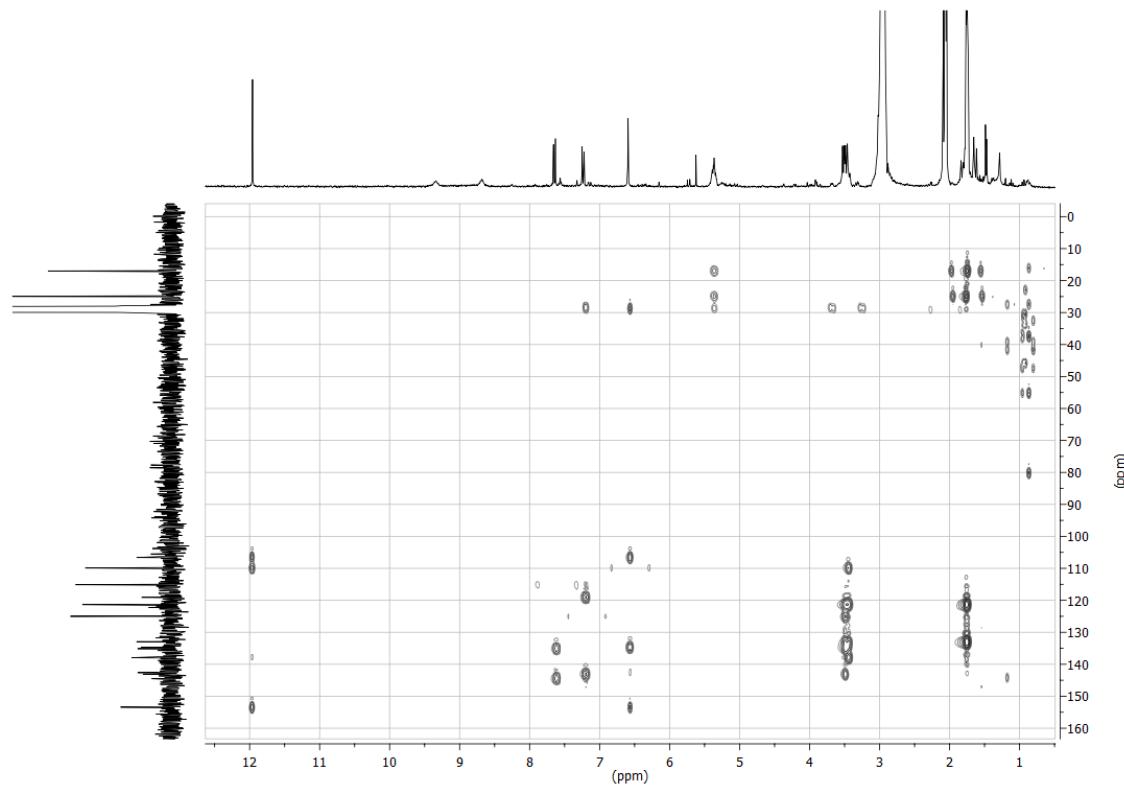


Figure S14. 2D HMBC (acetone- d_6) spectrum of garciniaxanthone C (3).